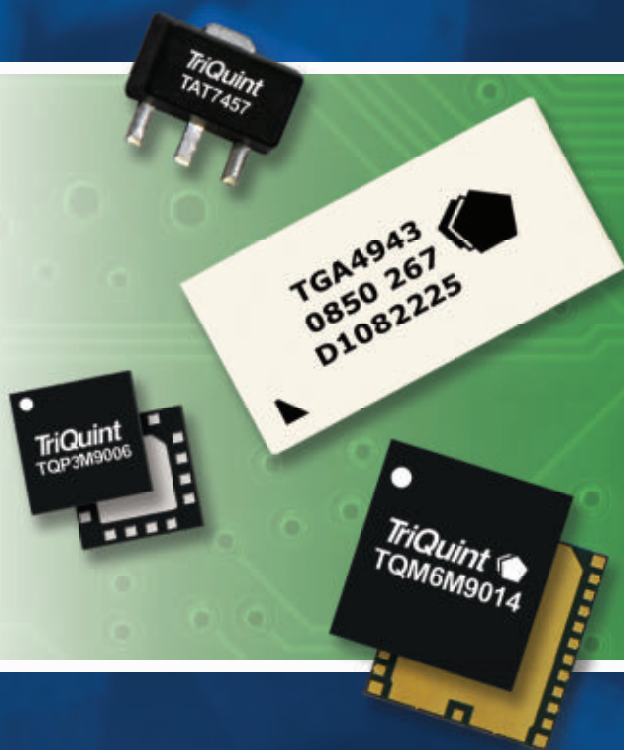


Product Selection Guide



**Choose TriQuint's
Innovative RF Solutions**



*Connecting the Digital World
to the Global Network®*

TriQuint 
SEMICONDUCTOR

Welcome to Our Product Selection Guide

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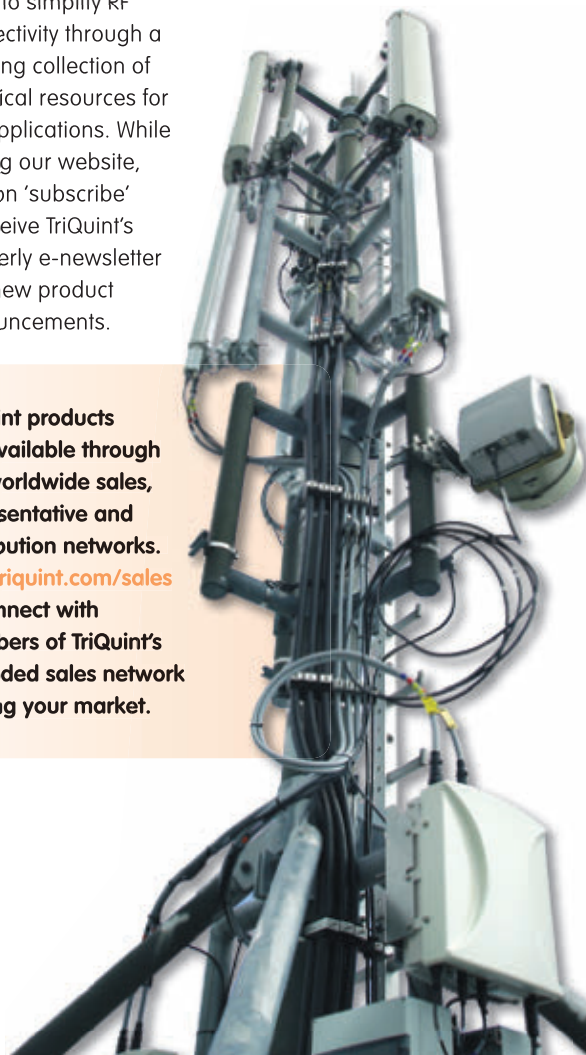
This guide contains a subset of the total selection of products available from TriQuint. If you are unable to locate the product you need, please contact your local sales representative or the factory for more information.

Welcome to TriQuint Semiconductor's 2011-12 Product Selection Guide. Our guide lists over 600 standard products - we also highlight 48 new releases and four new space-qualified products. TriQuint products are organized both by key market applications and product types. We've also included block diagrams with color coding to indicate where TriQuint product solutions exist.



We invite you to visit our website at **www.triquint.com** to obtain full product specifications and to utilize our block diagrams which make it easy to drill down to specific products. TriQuint's Tech Connect page, **www.triquint.com/techconnect**, offers additional ways to simplify RF connectivity through a growing collection of technical resources for key applications. While visiting our website, click on 'subscribe' to receive TriQuint's quarterly e-newsletter and new product announcements.

TriQuint products are available through our worldwide sales, representative and distribution networks. Visit triquint.com/sales to connect with members of TriQuint's extended sales network serving your market.



About TriQuint Semiconductor

TriQuint Semiconductor
'Connects the Digital World
to the Global Network®'
through our wide selection
of innovative RF solutions.

We design, develop and manufacture advanced, high-performance RF solutions with Gallium Arsenide (GaAs), Gallium Nitride (GaN), Surface Acoustic Wave (SAW) and Bulk Acoustic Wave (BAW) technologies. Our product portfolio of active and acoustic technologies serves mobile device, 3G / 4G base station, microwave, optical, CATV / FTTH, WLAN and defense / aerospace applications.



RF products serving start-up firms as well as the world's largest, most well-established companies. We also support the need for custom solutions through the industry's widest selection of foundry processes based on GaAs and GaN technologies.

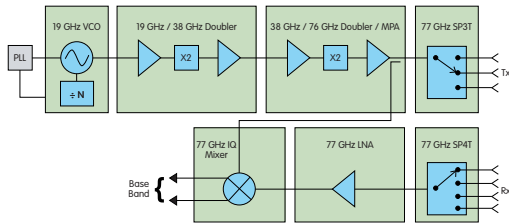
Growth throughout 2010 and 2011 has led to capacity expansion at all three US manufacturing facilities as well as our San Jose Design Center. These expansions will further equip us to meet today's product demands while we position TriQuint to serve the growing needs of wireless manufacturers around the world.



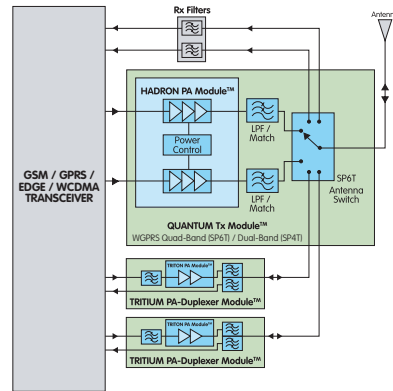
TriQuint solutions, designed and crafted with the industry's largest in-house technology portfolio, enable quicker design turns while lowering overall system costs. We are an award-winning provider of innovative

Key advantages of GaAs, GaN, SAW and BAW technologies:

- GaAs can operate efficiently at higher breakdown voltages compared to silicon-based semiconductor technologies while generating less noise in frequencies in excess of 250 MHz. GaAs offers high efficiency, linearity and good wideband performance.
- GaN offers greater power handling and density than GaAs beginning at 20 MHz. Intrinsic GaN technology advantages enables performance at a given power level using fewer or smaller devices. GaN offers strong linearity and efficiency, plus greater wideband capability.
- SAW filter technology offers excellent performance and economy through 2.5 GHz. We are growing our SAW capacity to include an array of temperature-compensated SAW products that will expand this versatile technology's capabilities for new and emerging applications.
- BAW filters offer superior loss levels, stronger ESD performance and greater resistance to temperature effects from 2.5 to 6 GHz. BAW is ideal for challenging applications including co-existence filter requirements.



Example of a 77 GHz Radar Front-End



**Cellular & GPS
Transceiver for
Auto Telematics**

Amplifiers & Low Noise Amplifiers

Description	Frequency Range (GHz)	Psat (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style	Part Number
77 GHz LNA	72 - 80	5	20	5	3.5 / 54	Die	TGA4705-FC
77 GHz MPA	76 - 80	14	12	—	3.5 / 75	Die	TGA4706-FC

Switches

Description	Frequency Range (GHz)	Insertion Loss	Isolation (dB)	P1dB (dBm)	Control Voltage (V)	Package Style	Part Number
SP3T	60 - 90	2.3	20	>-13	-5 / 1.35	Die	TGS4305-FC
SP4T	70 - 90	3	20	>-8	-5 / 1.35	Die	TGS4306-FC

Frequency Converters & Mixers

Description	RF Frequency Range (GHz)	Conversion Gain (dB)	LO / RF Isolation (dB)	Psat (dBm)	Voltage / Current (V / mA)	Package Style	Part Number
19 GHz VCO w/8:1 Prescaler	18.5 - 19.5	—	-105**	7.0	5 / 158	Die	TGV2204-FC
19 / 38 GHz Converter / MPA	36 - 40	9	—	14.5	3.5 / 65	Die	TGC4703-FC
38 / 77 GHz Converter / MPA	76 - 77	6	—	15.0	4 / 230	Die	TGC4704-FC
77 GHz Down Converting I/Q Mixer	75 - 82	-13.5	22	—	1.1 / 7	Die	TGC4702-FC

NOTES: ** = Phase Noise (dBc / Hz @ 1 MHz Offset)

Integrated Products

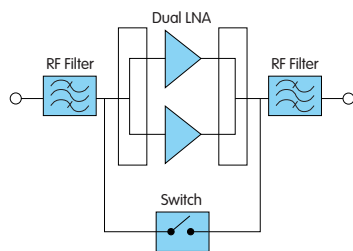
Description	Frequency Bands	Features	Package Size (mm)	Part Number
QB GSM / GPRS Tx Module; PA / LPF / SP6T Switch	GSM850 / 900, DCS / PCS	High System Efficiency & Small Size	6x6x1.1	TQM6M4003
QB GSM / GPRS / EDGE-Polar PA Module	GSM850 / 900, DCS / PCS	-90 dBm Typ Rx Noise, +3 to +8 dBm Pin Nominal	5x5x1	TQM7M5012
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Band 1	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM767021
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Band 2	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM666022
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Bands 5 and 6	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM616025
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Band 8	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM626028L
Quad-Band GSM / GPRS / EDGE-Linear TRP Tx Module: PA / LPF / SP8T WEDGE Switch w/ Quad-Band WCDMA Antenna Pass-Through	GSM850 / 900, DCS / PCS & WCDMA B1, B2, B5 / 6, B8	Integrated QB GSM / GPRS / EDGE PA & Antenna Switch Supporting WCDMA TRP Compliant at 4:1 Mismatch	7x7.5x1.1	TQM6M9014

Filters & Duplexers

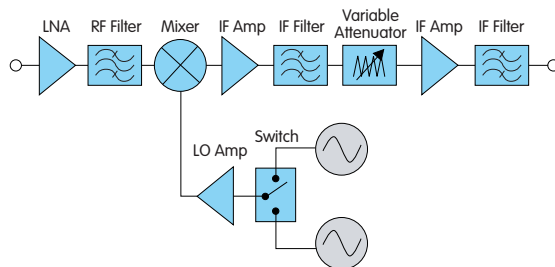
Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
Duplexer, Cell Band	836.5 / 881.5	25 / 25	1.9 / 1.9	SE / SE	–	3.8x3.8	856356
CDMA 2-in-1 Rx Filter	881.5 / 1960	25 / 60	1.6 / 2.2	SE / BAL	–	2x1.5	856565
GPS RF Filter	1575.42	2	1.25	SE / SE	30 @ 1624	2x1.5	856584
GPS RF Filter	1575.42	2	0.75	SE / SE	35 @ 1635	1.4x1.2	856561
GPS RF Filter	1575.42	2	1.1	SE / BAL	20 @ 1635	1.4x1.2	856576
GPS RF Filter, Auto	1575.42	2	1.8	SE / SE	45 @ 1637	3x3	856039
GPS RF Filter, Auto	1575.42	2	1.3	SE / SE	45 @ 1640	3x3	856139
SDARS Filter	2332.5	45	1.7	SE / BAL	35 @ 2100	1.4x1.2	856604
GPS / SDARS Diplexer	1575.42 / 2332.5	3 / 25	0.6 / .08	SE / SE	GPS Port: 40 @ 2332 SDARS Port: 31 @ 1572	3x3	TQM2M9016*

NOTES: * = New

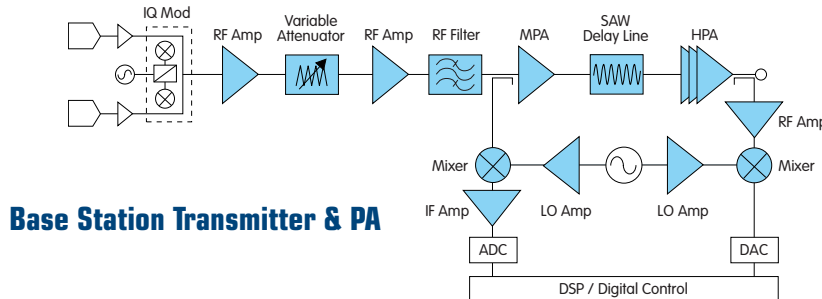
GUIDE BY MARKET | Base Station



Tower Mounted LNA



Base Station Receiver (Single Branch Shown)



Base Station Transmitter & PA

General Purpose Amplifiers

Description	Frequency Range (MHz)	P1dB / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
General Purpose Gain Block	DC - 3000	18.5 / 33	16.5	3.8	6 / 75	SOT89	AG603
General Purpose Gain Block	DC - 3500	18.5 / 33	13.6	4.4	6 / 75	SOT89	AG602
General Purpose Gain Block	DC - 3500	20.5 / 33.5	17.2	3.5	7 / 96	SOT89	EC1078
General Purpose Gain Block	DC - 4000	19.5 / 31	18.5	2.9	6 / 70	SOT89	EC1019
General Purpose Gain Block	DC - 4000	17.5 / 32	21.5	3.4	6 / 65	SOT89	ECG005
General Purpose Gain Block	DC - 4000	23.5 / 37	14.3	4.6	9 / 120	SOT89	ECG008
General Purpose Gain Block	DC - 4000	18 / 34.5	15.3	5.5	6 / 70	SOT89	ECG040
General Purpose Gain Block	DC - 5500	15 / 30	14.2	3.7	5 / 45	SOT86 / SOT363 / SOT89	ECG006
General Purpose Gain Block	DC - 6000	5.8 / 18.5	11	4.4	5 / 20	SOT86 / SOT363	AG201
General Purpose Gain Block	DC - 6000	7.5 / 19.5	17.7	3.1	5 / 20	SOT86 / SOT363	AG203
General Purpose Gain Block	DC - 6000	12 / 25	14.3	3.2	5 / 35	SOT86 / SOT363	AG302
General Purpose Gain Block	DC - 6000	12.5 / 25	18.4	3	5 / 35	SOT86 / SOT363	AG303
General Purpose Gain Block	DC - 6000	16 / 28.5	14.5	3.7	6 / 60	SOT86 / SOT89	AG402
General Purpose Gain Block	DC - 6000	16 / 28	18.9	3	6 / 60	SOT86 / SOT89	AG403
General Purpose Gain Block	DC - 6000	14.5 / 27.5	19.1	2.9	6 / 45	SOT86 / SOT89	AG503

General Purpose Amplifiers (cont.)

Description	Frequency Range (MHz)	P1dB / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
General Purpose Gain Block	DC - 6000	19 / 33	18.2	3.5	6 / 75	SOT86 / SOT89	AG604
General Purpose Gain Block	DC - 6000	12.5 / 26	21.4	3.4	5 / 30	SOT363 / SOT89	ECG001
General Purpose Gain Block	DC - 6000	15 / 29	19.5	3.7	5 / 45	SOT86 / SOT363 / SOT89	ECG002
General Purpose Gain Block	DC - 6000	23 / 36	19	3.5	9 / 110	SOT89	ECG003
General Purpose Gain Block	DC - 6000	13 / 27	15.5	3.2	5 / 35	SOT89	ECG004
General Purpose Gain Block	DC - 6000	18 / 32	20.1	3.4	6 / 65	SOT86 / SOT89	ECG055
MESFET IF Gain Block	50 - 870	20 / 41	13	3	5 / 150	SOT89	AH3
MESFET IF Amplifier	50 - 1000	22 / 42	19	2.2	5 / 150	SOT89	AH31
+5V Active Bias IF Gain Block	50 - 1000	20.5 / 44	19.5	5	5 / 95	SOT89	WJA1500
+5V Active Bias IF Gain Block	50 - 1000	19.5 / 36.5	19.3	4.7	5 / 65	SOT89	WJA1505
+5V Active Bias IF Gain Block	50 - 1000	20 / 47	14.4	5.4	5 / 95	SOT89	WJA1510
+5V Active Bias Gain Block	50 - 2300	19 / 36.5	15	5.2	5 / 85	SOT89	WJA1010
+5V Active Bias Gain Block	50 - 3000	20 / 44	19	5.4	5 / 100	SOT89	WJA1001
+5V Active Bias Gain Block	50 - 4000	20 / 40	18.5	5.6	5 / 90	SOT89	WJA1021
+5V Active Bias Gain Block	50 - 4000	19.5 / 37	14.5	5.5	5 / 80	SOT89	WJA1030
E-pHEMT LNA Gain Block	50 - 4000	20 / 37.5	21.5	1.1	5 / 85	SOT89	TQP3M9008
E-pHEMT LNA Gain Block	50 - 4000	21.4 / 37.5	22	1.1	5 / 85	3x3 QFN	TQP3M9018*
E-pHEMT LNA Gain Block	50 - 4000	22 / 40.5	24.7	0.9	5 / 125	SOT89	TQP3M9009
E-pHEMT LNA Gain Block	50 - 4000	22 / 40.5	24.7	0.9	5 / 125	3x3 QFN	TQP3M9019*
E-pHEMT LNA Gain Block	50 - 4000	21.5 / 40	15	2	5 / 85	SOT89	TQP3M9028*
MESFET Gain Block	60 - 3000	15 / 32	14	2.4	4.5 / 50	SOT89	AG101
MESFET Gain Block	60 - 3000	18 / 36	14	2.4	4.5 / 70	SOT89	AG102
MESFET Gain Block	60 - 3000	18 / 39	14	2.4	4.5 / 78	SOT89	AM1
MESFET Dual Amplifier	150 - 3000	24 / 46	12	4.1	5 / 300	SOIC-8	AH11
MESFET Amplifier	250 - 4000	21.5 / 42	14	3.2	5 / 150	SOT89	AH1
E-pHEMT LNA Gain Block	500 - 4000	22 / 35	19	0.8	5 / 55	3x3 QFN	TQP3M9005*
E-pHEMT LNA Gain Block	500 - 4000	22.5 / 38.5	18.5	1	5 / 90	3x3 QFN	TQP3M9006*
E-pHEMT LNA Gain Block	500 - 4000	23.5 / 42	18	1.3	5 / 135	SOT89	TQP3M9007*

NOTES: * = New

High Linearity Driver Amplifiers

Description	Frequency Range (MHz)	P1dB / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
26.5 dBm MESFET Amplifier	50 - 1500	26.5 / 47	13.5	3.5	9 / 200	SOT89	AH101
30 dBm MESFET Amplifier	50 - 2200	30 / 47	17	2.5	11 / 330	6x6 QFN	AH202
24.5 dBm HBT Amplifier	50 - 4000	24.5 / 41.5	21	4.5	5 / 88	SOT89	TQP7M9101*
24 dBm HBT Amplifier	60 - 2500	24 / 40	19	5	5 / 150	SOT89	AH114
27 dBm MESFET Amplifier	60 - 2700	27 / 46	29	2.5	4.5; 9 / 275	SOIC-8	AH103A
24.7 dBm HBT Amplifier	60 - 3500	24.7 / 40	19.5	4	5 / 160	SOT89	AH118
25 dBm HBT Amplifier	60 - 3500	25 / 40	19.5	4.6	5 / 115	SOT89	AH128
27 dBm MESFET Amplifier	350 - 3000	27 / 46	14.5	3.1	9 / 200	SOT89	AH102A
31 dBm HBT Amplifier	400 - 2300	31 / 46	18	7	5 / 450	4x4 QFN	ECP100
31 dBm HBT Amplifier	400 - 2300	31 / 46	18	7	5 / 450	SOIC-8	AH215
33 dBm HBT Amplifier	400 - 2300	33 / 49	18	8	5 / 800	4x4 QFN	ECP200
33 dBm HBT Amplifier	400 - 2300	33 / 49	18	8	5 / 800	SOIC-8	AH312
27.5 dBm HBT Amplifier	400 - 4000	27.5 / 44	21	4	5 / 140	SOT89	TQP7M9102*
28.5 dBm HBT Amplifier	400 - 3600	28.5 / 45	20	4.5	5 / 150	SOT89	AH125
31 dBm HBT Amplifier	400 - 2700	31 / 47	20	5.9	5 / 300	SOIC-8	AH225
33 dBm HBT Amplifier	400 - 2700	33 / 49	19.5	4.6	5 / 500	SOIC-8	AH322
35.5 dBm HBT Amplifier	400 - 2700	35.5 / 50	16	7	5 / 800	4x5 DFN	AH420

NOTES: * = New

High Linearity Driver Amplifiers (cont.)

Description	Frequency Range (MHz)	P1dB / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
33 dBm HBT Amplifier	700 - 2700	33 / 50	27.5	7	5 / 680	5x5 QFN	AH323
39 dBm HBT Amplifier	700 - 2900	39 / -	16.5	8	12 / 300	5x6 DFN	AP561
28 dBm HBT Amplifier	700 - 3800	28 / 42	28.5	2.9	5 / 225	4x4 QFN	TQP8M9013
28.7 dBm HBT Amplifier	800 - 1000	28.7 / 43	17.5	7	5 / 250	SOIC-8	AH116
28.5 dBm HBT Amplifier	1800 - 2300	28.5 / 44	14.5	6	5 / 250	SOIC-8	AH115
30 dBm HBT Amplifier	1800 - 2700	30 / 46	24.6	5.5	5 / 400	SOIC-8 / 4x5 DFN	AH212
39 dBm HBT Amplifier	3300 - 3800	39 / -	11.5	8	12 / 400	5x6 DFN	AP562
33 dBm HBT Amplifier	3300 - 3800	33 / -	25	7.3	5 / 600	5x5 QFN	AH315

Variable Gain Amplifiers

Description	Frequency Range (MHz)	P1dB / OIP3 (dBm)	Gain (dB)	Gain Range (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
Variable Gain Amplifier	50 - 2200	22 / 42	15.5	20	5 / 150	4x4 QFN	VG025
Variable Gain Amplifier	700 - 1000	22 / 40	16	29	5 / 150	6x6 QFN	VG101
Variable Gain Amplifier	700 - 2800	27.5 / 43	29	30	5 / 240	5x5 QFN	TQM8M9074*
Variable Gain Amplifier	1800 - 2700	22 / 39.5	13.5	26.5	5 / 150	6x6 QFN	VG111
Digital Variable Gain Amplifier	1800 - 2700	24.5 / 41.5	31	31.5	5 / 200	6x6 QFN	TQM879006*

NOTES: * = New

Low Noise Amplifiers

Description	Frequency Range (GHz)	P1dB / IIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
LNA, Balanced FET Low Band	700 - 915	- / 13.5	20.5	0.55	4 / 70	4x4 QFN	TQP3M6004
LNA, Discrete Low Band High Linearity	700 - 915	26 / 23.5	16	0.8	5 / 150	SOT89	TGF2021-04-SD
LNA, Balanced FET	800 - 3000	21 / 11	22	0.4	4 / 100	2x2 QFN	TGA2602-SM
LNA, Balanced FET Mid Band	1700 - 2000	- / 14.4	18	0.55	3.5 / 50	4x4 QFN	TQP3M6005*

NOTES: * = New

28V Transistors

Description	Frequency Range (MHz)	P1dB / IMD3 (dBm) / (dBc)	Gain (dB)	Efficiency (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
InGaP HBT PA, 1.8W, Ultra High Linearity	800 - 2350	32.5 / -60	15.8	55	28 / 40	5x6 DFN	AP601
InGaP HBT PA, 3.7W, Ultra High Linearity	800 - 2350	35.7 / -62	15.5	55	28 / 80	5x6 DFN	AP602
InGaP HBT PA, 7W Ultra High Linearity	800 - 2350	38.5 / -51	17	53	28 / 160	5x6 DFN	AP603

TriPower™ High Power Transistors

Description	Frequency Range (GHz)	P1dB (Psat)	Gain (dB)	PAE (%)	Voltage / Current (V / mA)	Package Style	Part Number
120W TriPower™ HVHBT Amplifier	2.11 - 2.17	51.1	16.6	64.5	28 / 550	Flanged Screw Down	TG2H214120-FL*
120W TriPower™ HVHBT Amplifier	2.11 - 2.17	51.1	16.6	64.5	28 / 550	Flanged Solder Down	TG2H214120-FS*
220W TriPower™ HVHBT Amplifier	2.11 - 2.17	53.9	16.4	65.4	28 / 600	Flanged Screw Down	TG2H214220-FL*

NOTES: * = New

Control Products

Description	Frequency Range (MHz)	Insertion Loss (dB)	Isolation / Atten Range (dB)	P1dB (dBm)	Control Voltage (V)	Package Style (mm)	Part Number
SP3T Switch	DC - 2000	0.45	28 / -	>36.5	2.6 / 0	3x3 QFN	TQP4M3018
SP3T Switch	DC - 2000	0.6	22 / -	>34.5	2.6 / 0	2x2 QFN	TQP4M3019
Through Line	DC - 6000	0.1	-	-	-	3x3 QFN	TQM4M9073*
6-Bit, Digital Attenuator, Parallel Ctrl	DC - 4000	1.3	- / 31.5	30	5 / 0	4x4 QFN	TQP4M9071

NOTES: * = New

Control Products (cont.)

Description	Frequency Range (MHz)	Insertion Loss (dB)	Isolation / Atten Range (dB)	P1dB (dBm)	Control Voltage (V)	Package Style (mm)	Part Number
6-Bit, Digital Attenuator, Serial Ctrl	DC - 4000	1.3	- / 31.5	30	5 / 0	4x4 QFN	TQP4M9072
SPDT Switch	1000 - 6000	0.6	28 / -	31.5	3 / 0	1.3x2 DFN	TQS5200
DPDT Switch	1000 - 6000	0.8	33 / -	33	3 / 0	3x3 QFN	TQS5202

Frequency Converters & Mixers

Description	RF Frequency Range (MHz)	Conversion Gain (dB)	LO / RF Isolation (dB)	IIP3 (dBm)	Voltage Current (V / mA)	Package Style (mm)	Part Number
WB Mixer, LO	500 - 2500	-5.7	8	24	3 - 6 / 6	MW6	CMY210
WB Mixer, LO, IF	500 - 2500	10	8	9	3 - 6 / 12	SCT598	CMY212
WB Mixer, LO, IF, Low Current	500 - 2500	9.5	10	10	3 - 6 / 8	SCT598	CMY213
Mixer, LO	700 - 1500	-9	17	36	5 / 50	MSOP-8	ML483
Single Branch Converter, RF, LO, IF	800 - 915	22	60	15	5 / 360	6x6 QFN	CV110-1A
Single Branch Converter, RF, LO, IF	800 - 960	22	60	15	5 / 360	6x6 QFN	CV110-3A
Dual Branch Converter, LO, IF	800 - 960	10.5	14	18.5	5 / 390	6x6 QFN	CV210-3A
Mixer, LO	1500 - 3200	-8.5	2	35	5 / 45	MSOP-8	ML485
Single Branch Converter, RF, LO, IF	1700 - 2000	21	45	17	5 / 360	6x6 QFN	CV111-1A
Single Branch Converter, RF, LO, IF	1900 - 2200	21	40	17	5 / 360	6x6 QFN	CV111-3A
Mixer, LO	1900 - 2700	-8.1	9	30	5 / 110	SOIC-8	ML501

NOTES: RF = RF Amplifier, LO = LO Amplifier, IF = IF Amplifier

Discrete Transistors

Description	Frequency Range (MHz)	P1dB / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage Current (V / mA)	Package Style (mm)	Part Number
MESFET	DC - 2500	26.5 / -	11	1.72 / 55	2 - 6 / 350	SOT223	CLY5
MESFET	DC - 3000	23.5 / -	15.5	1.48 / 55	2 - 6 / 180	MW6	CLY2
0.5W HFET	DC - 6000	28 / 40	18	3.2 / -	8 / 100	SOT89	TGF2960-SD
1W HFET	DC - 6000	31 / 43	16	4 / -	8 / 200	SOT89	TGF2961-SD
MESFET	50 - 4000	21 / 42	19	2 / -	5 / 140	SOT89	FH1
MESFET	50 - 4000	18 / 36	19	2 / -	5 / 140	SOT89	FH101
0.5W HFET	50 - 4000	27 / 40	19	2.7 / -	8 / 125	SOT89	FP1189
1W HFET	50 - 4000	30 / 44	18	4.5 / -	8 / 250	SOT89	FP2189
2.5W HFET	50 - 4000	34 / 46	18	3.5 / -	9 / 450	6x6 QFN	FP31QF

RF Filters

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
FRS RF or GPS IF Filter	465	6	1.4	SE / SE	40 @ 445	3x3	856288
RF Filter - Band 12 Uplink	707	18	1.5	SE / SE	9 @ 728	3x3	856884
RF Filter - Band 12 Downlink	737	18	1.8	SE / SE	37 @ 708	3x3	856883
RF Filter - Band 13 Downlink	751.5	11	1.5	SE / SE	40 @ 776	3x3	856794*
RF Filter - Band 13 Uplink	781.5	11	1.5	SE / SE	38 @ 757	3x3	856764
RF Filter - Band 13 Uplink	782	10	1.52	SE / SE	15 @ 765	3x3	856844
RF Filter - Band 5 Uplink	836.5	25	2.7	SE / SE	28 @ 869	3x3	855729
RF Filter - Band 5 Uplink	836.5	25	2.7	SE / SE	28 @ 869	3x3	856503*
RF Filter - Band 5 Uplink	836.5	25	1.9	SE / SE	35 @ 869	3x3	855821
RF Filter - Band 5 Uplink	836.5	25	2	SE / SE	10 @ 869	3x3	856704
RF Filter - Band 20 Uplink	847	30	1.3	SE / SE	10 @ 882	3x3	856932*
RF Filter - Band 5 Downlink	881.5	25	2.7	SE / SE	40 @ 849	3x3	856504*
RF Filter - Band 5 Downlink	881.5	25	2.7	SE / SE	40 @ 849	3x3	855728

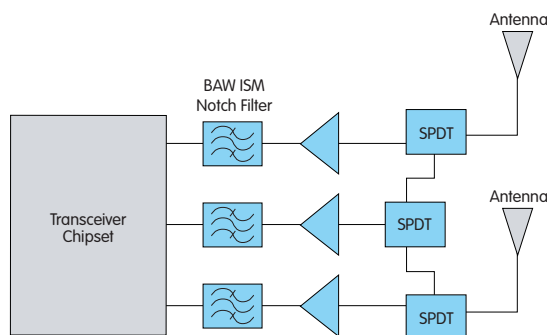
NOTES: * = New

RF Filters (cont.)

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
RF Filter – Band 5 Downlink	881.5	25	1.8	SE / SE	35 @ 849	3x3	855782
Cell Band Delay Filter, 450 ns	881.5	25	25	SE / BAL	–	7x5.5	856716
RF Filter – Band 8 Uplink	897.5	35	1.9	SE / SE	14 @ 930	3x3	856671
RF Filter – Band 8 Uplink	897.5	35	1.5	SE / SE	15 @ 930	3x3	856657
RF Filter – Band 8 Uplink	897.5	35	1.4	SE / SE	10 @ 984	3x3	856824
RF Filter – Band 8 Downlink	942.5	35	2	SE / SE	5 @ 915	3x3	855820
RF Filter – Band 8 Downlink	942.5	35	3.2	SE / SE	12 @ 915	3x3	855810
RF Filter – Band 8 Downlink	942.5	35	2.5	SE / SE	25 @ 915	3x3	856528
GSM Band Delay Filter, 450 ns	942.5	35	25.5	SE / SE	–	7x5.5	856766
RF Filter – Band 11 Uplink	1445.4	35	1.25	SE / SE	20 @ 1495.9	3x3	856928*
RF Filter – Band 3 Uplink	1747.5	75	2	SE / SE	22 @ 1676	3x3	856654
RF Filter – Band 3 Downlink	1842.5	75	1.9	SE / SE	10 @ 1785	3x3	855860
RF Filter – Band 2 Uplink	1880	60	2.4	SE / SE	7 @ 1930	3x3	855849
RF Filter – Band 2 Uplink	1880	60	2.8	SE / SE	30 @ 1930	3x3	856530
RF Filter – Band 2 Uplink	1880	60	2.2	SE / SE	15 @ 1806	3x3	856705
RF Filter – Band 2 Uplink	1880	60	2.3	SE / SE	10 @ 1790	3x3	856880
RF Filter – Band 1 Uplink	1950	60	2.2	SE / SE	40 @ 2110	3x3	856532
RF Filter – Band 1 Uplink	1950	60	1.8	SE / SE	20 @ 2100	3x3	856678
RF Filter – Band 2 Downlink	1960	60	2.1	SE / SE	10.3 @ 1910	3x3	855817
RF Filter – Band 2 Downlink	1960	60	2.25	SE / SE	14 @ 1910	3x3	856531
Delay Filter, PCS 450 ns	1960	60	25	SE / BAL	–	7x5.5	856717
Delay Filter, UMTS 450 ns	2140	60	25	SE / BAL	–	7x5.5	856649
RF Filter – Band 1 Downlink	2140	60	2.3	SE / SE	25 @ 1980	3x3	856738

NOTES: * = New

TriQuint Semiconductor offers a wide variety of **base station IF filters**. To view a selection of the most common filters, please go to the SAW filter section on pages 31 - 36.



Broadband Transceiver

Amplifiers

Description	Frequency Range (GHz)	P1dB / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
39 dBm HBT Amplifier	0.7 - 2.9	39 / –	16.5	8	12 / 300	5x5 QFN	AP561
33 dBm HBT Amplifier	3.3 - 3.8	33 / –	25	–	5 / 600	5x5 QFN	AH315
39 dBm HBT Amplifier	3.3 - 3.8	39 / –	11.5	–	12 / 400	5x6 DFN	AP562
WiMAX Driver Amp / PA, SB	3.4 - 3.8	30 / 42	24	–	6 / 770	5x5 QFN	TGA2703-SM

NOTES: SB = Self Biased

Discrete Transistors

Description	Frequency Range (GHz)	P1dB / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
MESFET	DC - 3000	23.5 / -	15.5	1.48 / 55	2 - 6 / 180	MW6	CLY2
0.5W HFET	DC - 6000	28 / 40	18	3.2 / -	8 / 100	SOT89	TGF2960-SD
1W HFET	DC - 6000	31 / 43	16	4 / -	8 / 200	SOT89	TGF2961-SD
MESFET	50 - 4000	21 / 42	19	2 / -	5 / 140	SOT89	FH1
MESFET	50 - 4000	18 / 36	19	2 / -	5 / 140	SOT89	FH101
0.5W HFET	50 - 4000	27 / 40	19	2.7 / -	8 / 125	SOT89	FP1189
1W HFET	50 - 4000	30 / 44	18	4.5 / -	8 / 250	SOT89	FP2189
2.5W HFET	50 - 4000	34 / 46	18	3.5 / -	9 / 450	6x6 QFN	FP31QF

Switches

Description	Frequency Range (GHz)	Insertion Loss (dB)	Isolation (dB)	P1dB (dBm)	Control Voltage (V)	Package Style (mm)	Part Number
SP2T 802.11 a, b, g	DC - 6	0.6	28	31.5	3 / 0	1.3x2 DFN	TQS5200

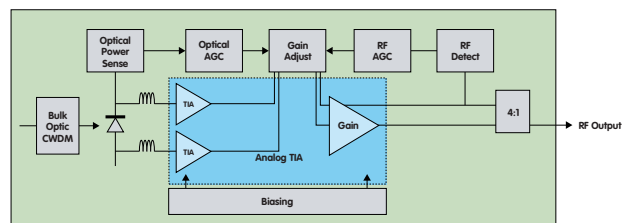
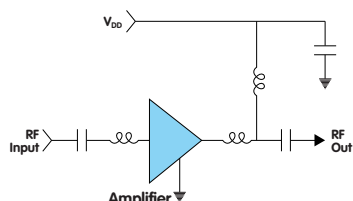
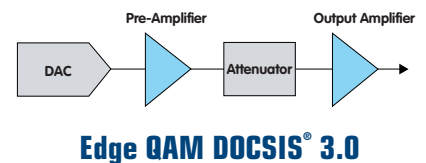
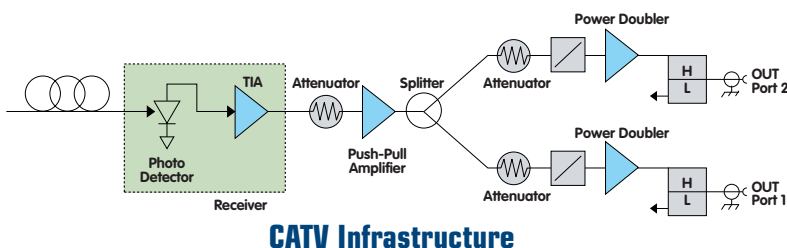
Filters For Coexistence

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
ISM Passband Filter for Coexistence	2436	72	2	SE / SE	20 @ 2495	1.7x1.3	885007
ISM Notch RF Filter for Coexistence	2440	72	1.5 (Out of Band IL)	SE / SE	25 @ 2440 (Notch Rej)	1.7x1.3	885008
ISM Notch RF Filter for Coexistence	2440	85	2 (Out of Band IL)	SE / SE	18 @ 2440 (Notch Rej)	1.7x1.3	885010

IF Filters

TriQuint Semiconductor offers a wide variety of BWA / WiMAX IF filters. To view a selection of the most common filters, please go to the SAW filter section on pages 31-36.

GUIDE BY MARKET | Cable



Amplifiers

Description	Application	Frequency Range (MHz)	P1dB / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
CATV Gain Block, Flex Gain	Home Amplifier	DC-2000	21 / 38	16-21	2	5 - 8 / 100	SOT89	TAT7457*
Dual HBT Amplifier	General Purpose	DC - 2700	19 / 33	18	3.5	>6 / 75	SOT86 / SOT89	AG604
On-Chip Linearized Amplifier	DOCSIS® 3.0 OUTPUT	40 - 1000	- / 43	17	4.7	5 / 380	SOIC-8	TAT7467H
CATV Gain Block	DOCSIS® 3.0 OUTPUT	40 - 1000	27 / 46	20	1.5	8 / 350	4x4 QFN	TGA2803-SM
CATV Gain Block	DOCSIS® 3.0 OUTPUT	40 - 1000	27 / 46	20	1.5	8 / 350	5x5 QFN	TGA2806-SM
CATV Gain Block	DOCSIS® 3.0 OUTPUT	40 - 1000	28 / -	18.5	2.5	6 / 318	5x5 QFN	TGA2807-SM
Dual pHEMT Amplifier, High Gain	Infrastructure GP	50 - 1000	- / 38	17.5	3.2	5 / 235	SOIC-8	TAT7469
Dual pHEMT Amplifier	Infrastructure GP	50 - 1000	- / 41	13	4	6 / 190	SOIC-8	TAT7466
Dual MESFET Amplifier	Infrastructure GP	50 - 1000	25.5 / 43	11.1	4.5	5 / 320	SOIC-8	AH22S
Fiber to the Home TIA + Output Amp	Fiber to the Home, RFoG, Low Input	50 - 1000	-60 dBc CTB / CSO	38	2.9 pA / rHz EIN	10 - 12 / 120	4x4 QFN	TAT6254B*
CATV Gain Block, High Gain	Home Amplifier, MOCA Multi	50 - 1000	- / 41	22.5	2	8 / 190	SOT89	TAT7430B
CATV Gain Block, High Gain	Home Amplifier, MOCA	50 - 1000	- / 39	18	2	6 / 145	SOT89	TAT7427
CATV Gain Block	Home Amplifier	50 - 1000	- / 39	16	2.7	6 / 130	SOT89	TAT7461
MESFET Amplifier	General Purpose	50 - 1000	20 / 40	14.8	3.5	5 / 150	SOT89	AH2
Single Ended Darlington	Return Path Amplifier	50 - 1000	20 / 37	13.5	4.5	>7 / 165	SOIC-8	AG606
Fiber to the Home TIA + Output Amp	Fiber to the Home, RFoG	50 - 1000	-62 dBc CTB / CSO	32	3.9 pA / rHz EIN	5, 12 / 200, 130	4x4 QFN	TAT6254D
Fiber to the Home TIA + Output Amp	Fiber to the Home, High Output	50 - 1000	-63 dBc CTB / CSO	33	3.9 pA / rHz EIN	5, 12 / 200, 130	4x4 QFN	TAT6254C
MESFET Amplifier	General Purpose	50 - 1500	30 / 50	10.4	5.3	9 / 400	SOT89	AH101
Dual pHEMT Amplifier, Wideband	CATV+SAT Wideband Amp / VONU	50 - 2600	-77 dBc CTB / -83 dBc CSO	13	4.4	5 / 160	SOIC-8	TAT7464
CATV Gain Block, Wideband	CATV+SAT Wideband Amp / VONU	50 - 2600	- / 36	16.5	2.5	5 / 100	SOT89	TAT7460
HFET Gain Block	General Purpose	50 - 4000	27 / 39	12.4	2.7	8 / 200	SOT89	FP1189
MMIC Gain Block	General Purpose	60 - 3000	15 / 32	14	2.4	4 - 5 / 50	SOT89	AG101
MESFET Gain Block	General Purpose	60 - 3000	21 / 39	10	2.4	4.5 / 150	SOT89	AM1

NOTES: * = New

Filters

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
Cable IF Filter	36.15	8	19.7	SE / SE	38 @ 10.23	DIP	855748
Cable IF Filter	44	6	20.4	SE / SE	38 @ 7.6	DIP	855079
Cable IF Filter	202.75	1.2	6.6	SE / SE	40 @ 10	13.3x6.5	855068
Cable IF Filter	499.25	1	7	SE / SE	35 @ 6	9x7	855104
Tuner IF Filter	1086	10	4	BAL / BAL	40 @ 1046	3x3	855964
Tuner IF Filter	1086	10	4	BAL / BAL	40 @ 1046	3x3	856330
Tuner IF Filter	1090	10	5	BAL / BAL	50 @ 1050	3.8x3.8	856096
Tuner IF Filter	1216	8	3.75	BAL / BAL	12 @ 24	3x3	856365
Tuner IF Filter	1220	10	4.5	BAL / BAL	30 @ 60	3x3	856298
Tuner IF Filter	1220	50	3.9	BAL / BAL	33 @ 96	3.8x3.8	856598
Tuner IF Filter	1250	96	6	BAL / BAL	44 @ 1152	3x3	856653
Tuner IF Filter	1892	8	4.2	BAL / BAL	23 @ 1932	2.5x2	856236

Protectors

Description	Application	Leakage Current (nanoAmps)	Trigger Voltage (V)	Series Capacitance (pF)	Package Area (mm²)	Package Style	Part Number
CATV Protector	ESD & Secondary Protection	20 @ 1V, 500 @ 15V	18, 25, 41	0.29, 0.29, 0.22	1.8	T / SLP-3	TQP200002

GUIDE BY MARKET | Defense & Aerospace

TriQuint Semiconductor has been supporting the defense and aerospace market for more than 25 years with the industry's most advanced technology and world class customer support. We continue to build on that legacy with our pioneering innovation and leadership in Gallium Nitride (GaN) as well as new packaged product releases and multichip module capabilities. With a full-service wafer fab including the option of our DoD-accredited 'Trusted Foundry' program, plus our internal package and test capability, TriQuint is uniquely positioned to offer a complete solution to our customer's most demanding requirements. The flexibility that TriQuint provides in offering a variety of process technologies, products and packaging styles is ideal in supporting a growing number of applications such as:

- **Phased Array Radar**
- **Electronic Warfare**
- **Communications**
- **Missile Systems**
- **GPS Navigation Systems**

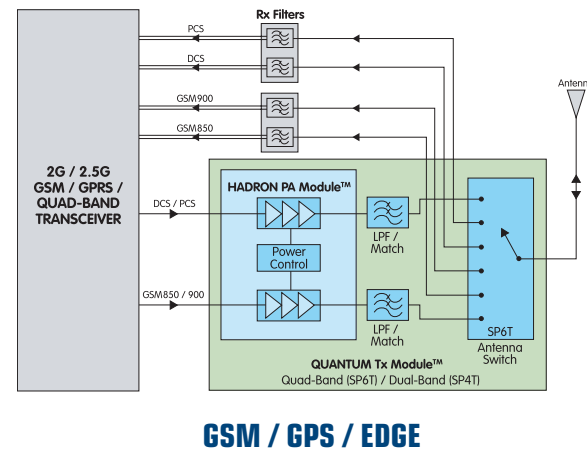
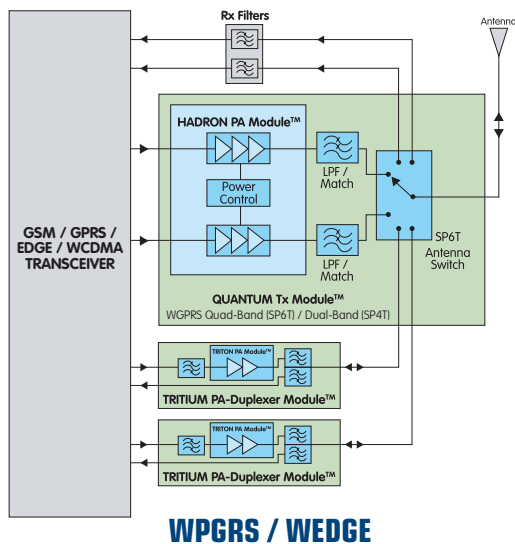
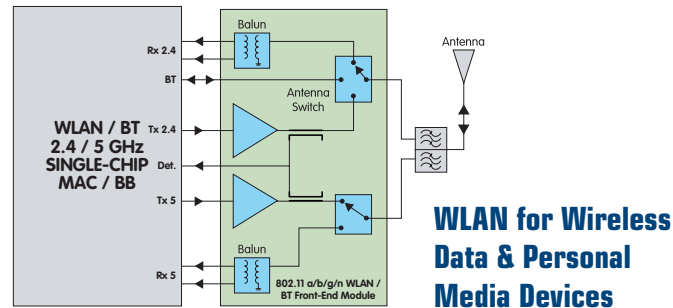
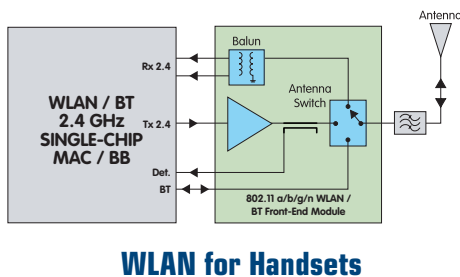
Many TriQuint products listed in this brochure support both commercial and defense-related applications. Those listed under a specific commercial market are also available for defense and aerospace use. If needed, products can be specially screened to meet the unique requirements of our customers. Offering 100% electrical screening along with visual inspection to either MIL-STD-883 Class B or Class S, our customers can be assured they are receiving a high-quality, highly reliable product.

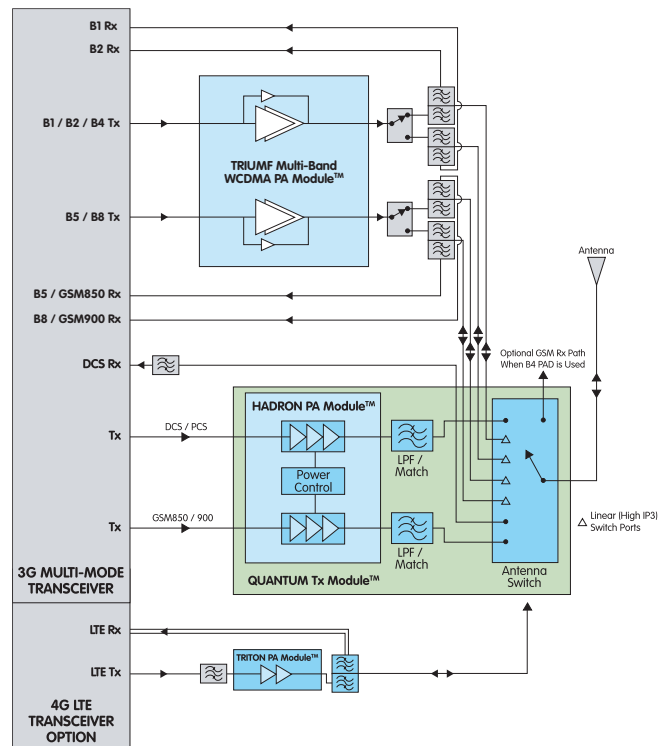
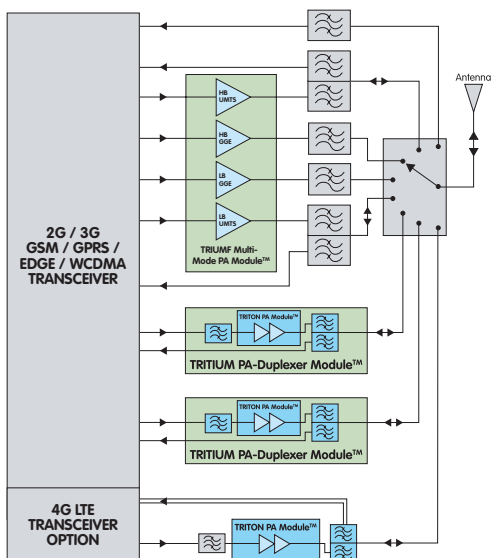
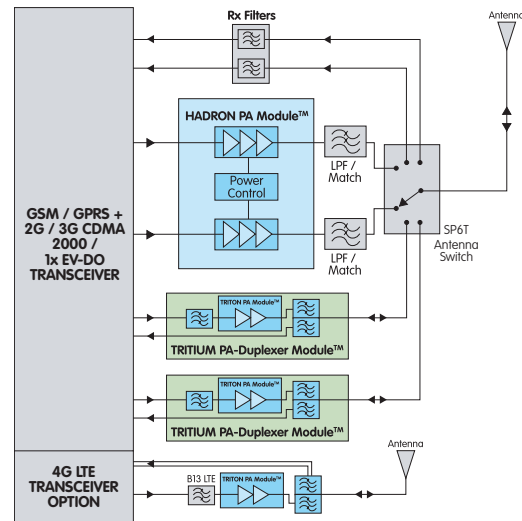
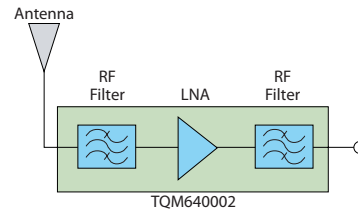
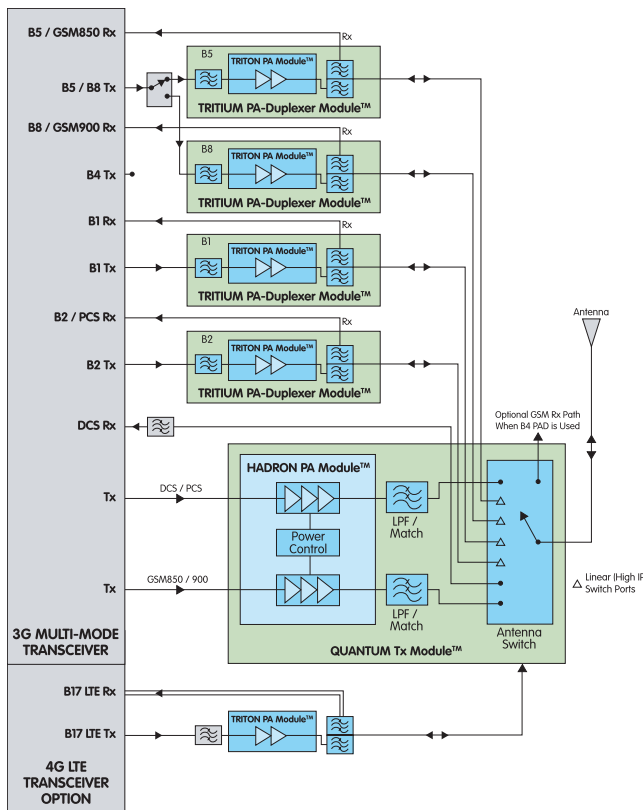
The TriQuint portfolio includes a large array of amplifiers along with key control products such as phase shifters, switches, attenuators and limiters that are ideal for defense and aerospace applications. Along with these active components, TriQuint also offers filter and oscillator products utilizing our in-house SAW and BAW technologies. Filter solutions with center frequencies between 30 MHz and 20 GHz are available in package sizes potentially as small as 1.5x0.8mm. Oscillators, with phase noise as low as -180 dBc/Hz and exceptional g-sensitivity, provide best-in-class performance. Come see what TriQuint can do for you.



Image Courtesy of Jamie Hunter/Aviacom

GUIDE BY MARKET | Mobile Devices





GSM / GPRS PA Module

Description	Bands	Features	Package Size (mm)	Part Number
Quad-Band GSM / GPRS PA Module	GSM900 & GSM850 / PCS	Low Band lbatt<1.5A @ Pcal w / PAE 55%	5x5x1	TQM7M4007

QUANTUM Tx Module™ Family (GSM / GPRS / EDGE)

Description	Bands	Features	Package Size (mm)	Part Number
Dual-Band GSM / GPRS Tx Module; PA / LPF / SP4T Switch; Quad-Band Tx & Dual-Band Rx	GSM900 / DCS or GSM850 / PCS	High Efficiency Broadband Tx, 2 Rx Ports	6x6x1	TQM6M4048
Quad-Band GSM / GPRS Tx Module; PA / LPF / SP6T Switch; Quad-Band Tx & Quad-Band Rx	GSM900 / DCS & GSM850 / PCS	High Efficiency Broadband Tx, 4 Rx Ports	6x6x1	TQM6M4049
Dual-Band GSM / GPRS Tx Module; PA / LPF / SP4T Switch; Quad-Band Tx & Dual-Band Rx	GSM900 / DCS or GSM850 / PCS	High Efficiency Broadband Tx, 2 Rx Ports	6x6x1	TQM6M4050*
Dual-Band GSM / GPRS Tx Module; PA / LPF / SP4T Switch; Quad-Band Tx & Dual-Band Rx	GSM900 / DCS or GSM850 / PCS	High Efficiency Broadband Tx, 2 Rx Ports	5x6x1	TQM6M4068*

NOTES: * = New

HADRON II PA Module™ Family (EDGE, 5x5mm Footprint)

Description	Bands	Features	Package Size (mm)	Part Number
Quad-Band GSM / GPRS / EDGE-Linear PA Module	GSM900 / DCS & GSM850 / PCS	Low Band lbatt < 1.5A @ Pcal w/PAE 55%	5x5x1	TQM7M5005H
Quad-Band GSM / GPRS / EDGE-Polar PA Module	GSM900 / DCS & GSM850 / PCS	+3 to +8 dBm Pin Nominal	5x5x1	TQM7M5012H
Quad-Band GSM / GPRS / EDGE-Linear PA Module	GSM900 / DCS & GSM850 / PCS	Input Power Controlled for GMSK & 8PSK	5x5x1	TQM7M5013
Quad-Band GSM / GPRS / EDGE-Polar PA Module	GSM900 / DCS & GSM850 / PCS	+3 to +8 dBm Pin Nominal	5x5x1	TQM7M5022

CDMA Switches

Description	Bands	Features	Package Size (mm)	Part Number
CDMA SP3T Switch	Cellular / PCS / AWS	Antenna Routing	2x2x0.6	TQP4M3019

TRITON PA Module™ Family (CDMA, WCDMA / HSUPA, LTE)

Description	Bands	Features	Package Size (mm)	Part Number
WCDMA / HSUPA PA Module, w/Coupler	Band 1	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM776011
CDMA & WCDMA / HSUPA PA Module, w/Coupler	PCS / Band 2	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM766012
CDMA & WCDMA / HSUPA PA Module, w/Coupler	AWS / Band 4	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM756014
CDMA & WCDMA / HSUPA PA Module, w/Coupler	Cellular / Band 5	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM716015
WCDMA / HSUPA PA Module, w/Coupler	Band 8	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM726018
LTE PA Module, w/Coupler	Band 13	LTE 1-Bit (Hi / Lo Power Modes)	3x3x0.9	TQM700013*

NOTES: * = New

TRITIUM II PA-Duplexer Module™ Family (CDMA, 7x4mm Footprint)

Description	Bands	Features	Package Size (mm)	Part Number
CDMA PA-Duplexer Module; SE Input w/Coupler	Cellular	2-Bit (Hi / Med / Lo Power Modes)	7x4x1.1	TQM613029
CDMA PA-Duplexer Module; SE Input w/Coupler	PCS	2-Bit (Hi / Med / Lo Power Modes)	7x4x1.1	TQM663029A
CDMA PA-Duplexer Module; SE Input w/Coupler	AWS	2-Bit (Hi / Med / Lo Power Modes)	7x4x1.1	TQM653029

TRITIUM III PA-Duplexer Module™ Family (WCDMA / HSUPA, 7x4mm Footprint)

Description	Bands	Features	Package Size (mm)	Part Number
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Band 1	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM676021
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Band 2	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM666022
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Band 4	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM656024
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Bands 5 & 6	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM616025
WCDMA / HSUPA PA-Duplexer Module; SE Input w/Coupler, Detector	Band 8	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM626028L

QUANTUM II Tx Module™ Family (WGPRS & WEDGE)

Description	Bands	Features	Package Size (mm)	Part Number
Quad-Band GSM / GPRS / EDGE-Linear TRP Tx Module: PA / LPF / SP8T WEDGE Switch w/ Quad-Band WCDMA Antenna Pass-Through	GSM850 / 900, DCS / PCS & WCDMA B1, B2, B5 / 6, B8	Integrated QB GSM / GPRS / EDGE PA & Antenna Switch Supporting WCDMA TRP Compliant at 4:1 Mismatch	7x7.5x1.1	TQM6M9014
Dual-Band GSM Tx Module: PA / LPF / SP6T WGPRS Switch w/ Dual-Band WCDMA Antenna Pass-Through	GSM900 / DCS of GSM850 / PCS & 2 WCDMA Bands	Integrated DB GSM / GPRS & 2 WCDMA Antenna Switch Ports	5x6x1	TQM6M9069*

NOTES: * = New

TRIUMF Module™ Family- GSM / GPRS / EDGE / WCDMA / HSUPA / LTE

Description	Bands	Features	Package Size (mm)	Part Number
Multi-Mode Quad-Band GMSK / EDGE / WCDMA PA Module	GSM850 / 900, DCS / PCS & WCDMA B1 & B8	2-Bit (Hi / Med / Lo Power Modes)	5x7.5x1	TQM7M9023*
Multi-Mode Quad-Band GMSK / EDGE / WCDMA PA Module	GSM850 / 900, DCS / PCS & WCDMA B1 & B5	2-Bit (Hi / Med / Lo Power Modes)	5x7.5x1	TQM7M9032*
Multi-Band WCDMA / HSUPA / HSPA+ / PA Module	High Bands 1,2,3,4,9,10 & Low Bands 5,6,8	1-Bit (Hi / Lo Power Modes); 1-Bit Band Specific Pout Adjust	5x4x0.9	TQM7M9070*

NOTES: * = New

3G / 4G Duplexers

Description	Bands	Features	Package Size (mm)	Part Number
LTE SE / BAL SAW Duplexer	Band 13	1.5 dB (Tx) / 1.6 dB (Rx) Insertion Loss	2.5x2x0.6	856879
LTE SE / BAL SAW Duplexer	Band 17	1.8 dB (Tx) / 2 dB (Rx) Insertion Loss	2.5x2x0.6	856931
LTE SE / BAL SAW Duplexer	Band 20	High Performance Temp. Compensated SAW	2.5x2x0.6	856979*
BC10 SE / BAL SAW Duplexer	BC10 (PCS)	Excellent Triple Beat performance	2.5x2x0.6	856999*
BC14 SE / SE BAW Duplexer	BC14 (Cellular)	Excellent Triple Beat performance	2.5x2x0.9	TQM963014*

NOTES: * = New

WLAN PA

Description	Bands	Features	Package Size (mm)	Part Number
802.11a 5 GHz WLAN PA MMIC	802.11 a	ETSLP-16 Package, Detector, Hi / Lo Linearity Mode	3x3x0.45	TQP787011

WLAN Switch

Description	Bands	Features	Package Size (mm)	Part Number
2.4 GHz & 5 GHz SPDT Switch MMIC	802.11 a, b, g	Slim-7 Package	1.3x2x0.45	TQS5200

WLAN LNA / Antenna Switch

Description	Bands	Features	Package Size (mm)	Part Number
2.4 GHz WLAN LNA + SP3T Switch MMIC WLAN Tx & Bluetooth® Paths	802.11 b, g	LNA Bypass, ETSLP-12 Package	1.5x1.5x0.55	TQP879001A

WLAN PA / Antenna Switch

Description	Bands	Features	Package Size (mm)	Part Number
2.4 GHz WLAN PA + Switch MMIC w/WLAN Rx Balun & Bluetooth® Path	802.11 a	ETSLP-16 Package, Coupler / Detector	3x3x0.45	TQM679002A
2.4 GHz & 5 GHz WLAN PA + Switch MMIC w/WLAN Rx Baluns & Bluetooth® Path	802.11 a, b, g, n	ETSLP-24 Package, Coupler / Detector	4x4x0.45	TQP6M9002

WLAN Filters

Description	Bands	Features	Package Size (mm)	Part Number
ISM Passband Filter	2436 MHz	72 MHz Bandwidth, 2 dB Insertion Loss	1.7x1.3x0.46	885007

Bluetooth® PA

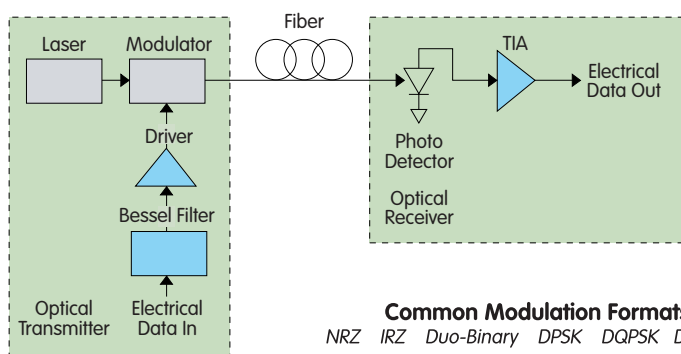
Description	Bands	Features	Package Size (mm)	Part Number
Bluetooth® EDR v2.0 Class 1 PA MMIC	2.4 to 2.5 GHz ISM Band	STSLP-12 Package	2x2x0.57	TQP770001

GPS LNA / Filter Module

Description	Bands	Features	Package Size (mm)	Part Number
GPS Filter-LNA-Filter Module	1575 MHz, GPS L1	Low Noise (1.56 dB) and High Gain (16 dB)	3x3x1.0	TQM640002

GPS Filters

Description	Bands	Features	Package Size (mm)	Part Number
GPS SAW Filter, SE / SE	1575 MHz, GPS L1	Ultra-low Insertion Loss of 0.5 dB (Hermetic CSP)	1.4x1.2x0.46	856756
GPS SAW Filter, SE / SE	1575 MHz, GPS L1	0.75 dB Insertion Loss (Hermetic CSP)	1.4x1.2x0.46	856561
GPS SAW Filter, SE / BAL	1575 MHz, GPS L1	1.1 dB Insertion Loss (Hermetic CSP)	1.4x1.2x0.46	856576
GPS SAW Filter, SE / SE	1575 MHz, GPS L1	0.6 dB Insertion Loss (Hermetic CSP)	1.4x1.2x0.46	856793



Optical Systems
(10, 40 & 100 Gb/s)

Drivers

Description	Frequency Range (GHz)	Power	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
9.9 - 12.5 Gb/s 3V - 7V Driver	DC - 13	3 - 7Vpp	32	–	3.3 - 5 / 115	8x8 QFN	TGA4956-SM
9.9 - 12.5 Gb/s Mod. Driver	DC - 16	3 - 10Vpp	35	2.5	5.5 - 8 / 210	11.4x8.9 SL	TGA4953-SL
9.9 - 12.5 Gb/s Mod. Driver	DC - 16	3 - 9Vpp	35	2.5	5.5 - 8 / 210	11.4x8.9 SL	TGA4954-SL
12.5 Gb/s NRZ Driver	DC - 18	3 - 11Vpp	16	–	8 / 285	Die	TGA4807
12.5 Gb/s NRZ Driver	DC - 18	6 - 8Vpp	16	3.5	5 - 8 / 70 - 175	Die	TGA1328-SCC
12.5 Gb/s NRZ Driver	DC - 18	4 - 8Vpp	16	3.5	8 / 175	8.9x8.9 SL	TGA8652-SL
15 Gb/s 10V Linear Mod. Driver	DC - 20	3 - 10Vpp	22	–	7 / 280	6x6 QFN	TGA4826-SM
40 & 100 Gb/s 8 Vpp SE Driver	DC - 30	3 - 9Vpp	32	–	6 - 7 / 270	14.4x7 SL	TGA4943-SL
45 Gb/s 8V pp SE Driver	DC - 35	5 - 9Vpp	30	–	6 - 7 / 300	16x8 SL	TGA4942-SL**
45 Gb/s 9Vpp Diff In / Out Driver	DC - 50	6 - 10Vpp Diff	27 Diff	–	5 - 6 / 500	Die	TGA4958**
32 Gb/s 9Vpp Diff In / Out Driver	DC - 35	6 - 9Vpp Diff	25 Diff	–	5 - 6 / 500	10x7 SL	TGA4959-SL**
Wideband Driver (40 Gb/s)	DC - 35	4Vpp	12	–	5 / 135	Die	TGA4832
43 Gb/s Driver	DC - 78	3.5Vpp	8	5	6 / 82	Die	TGA4803
10.7 - 12.5 Gb/s Linear Mod. Driver	0.03 - 8	12.5Vpp	20	–	8 / 310	8x8 QFN	TGA4823-2-SM

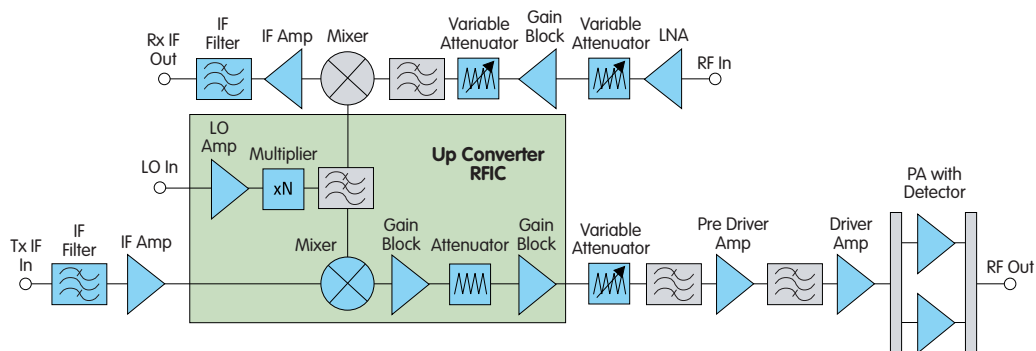
NOTES: ** = Coming Soon, SB = Self Biased, SE = Single-Ended

Amplifiers

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
LNA / Gain Block (40 Gb/s)	DC - 40	11.5	13	3.2	5 / 50	Die	TGA4830
CATV TFA / Gain Block	0.04 - 1	27 / 46	20	1.5	8 / 350	4x4 QFN	TGA2803-SM

Control Products

Description	Frequency Range (GHz)	Insertion Loss (dB)	Control Range (dB)	P1dB (dBm)	Supply Voltage (V)	Package Style (mm)	Part Number
Analog Attenuator	DC - 30	2	17	–	0 to -2	3x3 QFN	TGL4203-SM
Analog Attenuator	DC - >50	2	17	–	0 to -2	Die	TGL4203
Discrete Thru (0 dB Attenuator)	DC - 65	0	0	–	–	Die	TGL4201-00
Discrete Attenuators	DC - 65	–	2, 3, 6, 10	–	–	Die	TGL4201-02, 03, 06, 10
Bessel Filter	–	6, 7, 8, 9, 10 & 11 Cut-Off Freq	–	–	–	Die	TGB2010-00, -09 etc.
Bessel Filter	–	5, 6, 6.5, 7.5, 8 & 9 Cut-Off Freq	–	–	–	2x2 QFN	TGB2010-00, -09-SM etc.



Point-to-Point Radio

Amplifiers

Description	Frequency Range (GHz)	PldB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
2W HPA	5.5 - 8.5	32 (34) / 41	30	7 / -	6 / 1260	5x5 QFN	TGA2706-SM
2.5W HPA	5.9 - 8.5	34 / 42	18	7.5 / 37	6 / 1000	6x6 QFN	TGA2701-SM
HPA	6 - 18	(34.5) / -	24	- / 20	8 / 1200	Die	TGA9092-SCC
Gain Block	6 - 18	12.5 / -	13	5 / -	5 / 80	Die	TGA8035-SCC
2.8W HPA	6 - 18	(34.5) / -	24	- / 20	7 - 9 / 800 - 1200	Die	TGA2501
HPA	7 - 8.5	(38) / -	21	- / 42	7 / 2000	Die	TGA2701
Driver Amp	7 - 13	(30) / 37	25	- / 30	9 / 450	Die	TGA2700
Wideband Driver Amp	8 - 18	13 / -	17	5 / -	4.5 / 50	Die	TGA8399C
HPA	9 - 10.5	(38) / -	20	- / >38	4 - 9 / 2000	Die	TGA2704
HPA	10.5 - 12	(38) / -	19	- / >39	4 - 9 / 2000	Die	TGA2710
Driver Amp, SB	11 - 17	17 / -	23	6 / -	6 / 75	4x4 QFN	TGA2507-SM
Driver Amp	12 - 16	26 (26.5) / 37	23	7 / -	5 / 300	3x3 QFN	TGA2524-SM*
Driver Amp, SB	12 - 18	14 / -	17	-	6 / 40	Die	TGA2506
Driver Amp, SB	12 - 18	20 / -	28	6 / -	6 / 80	Die	TGA2507
1W HPA	12 - 19	30 / -	30	-	5 - 7 / 435	Die	TGA2508
HPA	12 - 19	29 / -	25	-	5 - 7 / 435	4x4 QFN	TGA2508-SM
2W HPA	12.3 - 15.7	(31) / -	33	7.0 / -	6 / 850	Die	TGA2520
2W HPA	12.5 - 16	(32) / 37	32	-	6 - 7 / 680	4x4 QFN	TGA2503-SM
2W HPA	12.5 - 17	(34) / -	26	- / 25	7.5 / 650	Die	TGA2510
2W HPA	12.5 - 17	(33.5) / -	25	- / 25	7.5 / 650	6.4x9.4 SG	TGA2510-SG
2W HPA	12.7 - 15.4	34 (35) / 43	28	6 / -	6 / 1300	Die	TGA2533*
2W HPA	12.7 - 15.4	33 (34.5) / 43	27	6 / -	6 / 1300	5x5 QFN	TGA2533-SM*
2W HPA	13 - 17	(34) / 40	32	-	6 - 7 / 680	Die	TGA2503
2W HPA	13 - 17	(34) / -	25	-	6 - 7 / 640	Die	TGA2505
2W HPA	13 - 17	(34) / -	33	-	5 - 8 / 680	17.8x8.4 FL	TGA2904-FL
2W HPA, PD	13 - 17	(34) / 38.5	26	- / 30	7.5 / 650	6.4x9.4 SG	TGA2902-1-SCC-SG
2W HPA	13 - 17	(34) / 40	33	-	5 - 8 / 680	6.4x9.4 SG	TGA8658-SG
4W HPA, Balanced	13 - 17	(36) / 44	25	- / 30	6 - 7 / 1300	Die	TGA2502
2W HPA, PD	13.75 - 14.5	(34) / 38.5	26	- / 30	7.5 / 650	6.4x9.4 SG	TGA2902-2-SCC-SG
1W HPA, PD	17 - 20	30 (32) / 42	20	-	5 - 7 / 825	Die	TGA4530
HPA	17 - 20	31 / 41	22	6.5 / -	6 / 820	4x4 QFN	TGA4532-SM
HPA	17 - 20	30.5 / 41	23	-	6 / 900	Die	TGA4532
Driver Amp	17 - 24	22 / -	19	4 / -	5 / 270	4x4 QFN	TGA2521-SM
HPA	17 - 24	31 (32) / 40	23	6 / -	7 / 720	Die	TGA4531
HPA, AGC, PD	17 - 24	(29) / 38	22	-	5 / 712	4x4 QFN	TGA2522-SM
HPA	17 - 27	29 (31) / 37	22	-	7 / 760	Die	TGA4502-SCC
Gain Block & 2x / 3x Multiplier	17 - 37	18 (22) / 26	20	7 / -	5 / 140	3x3 QFN	TGA4030-SM
Gain Block & 2x / 3x Multiplier	17 - 40	18 (22) / 24	22	7 / -	5 / 140	3x3 QFN	TGA4031-SM
Gain Block, Multiplier	17 - 43	22 / -	25	-	5 / 225	Die	TGA4040
2W HPA	18 - 23	32 (33) / 39	26	-	7 / 840	Die	TGA4022
HPA	18 - 27	29 / 37	14	-	6 / 480	Die	TGA1135-SCC
MPA	19 - 27	25 / 32	22	-	5 - 7 / 220	Die	TGA1073G-SCC
Gain Block	19 - 38	(22) / 30	20	-	5 / 160	Die	TGA4036
HPA	21 - 24	31 (32) / 41	22	6 / -	6 / 880	4x4 QFN	TGA4533-SM*
MPA	25 - 35	25 / -	18	-	6 / 220	4x4 QFN	TGA4902-SM
MPA	26 - 35	25 (32) / -	19	-	5 - 7 / 220	Die	TGA1073A-SCC
1W HPA	27 - 31	30 / -	22	- / 25	4 - 6 / 420	Die	TGA4509
2W HPA	27 - 31	32.5 (33) / 36.5	20	-	6 / 840	Die	TGA4513
HPA	27 - 32	28.5 / -	25	-	6 - 8 / 420	Die	TGA1073B-SCC
1W HPA	28 - 31	30 / -	19	- / 25	6 / 420	4x4 QFN	TGA4509-SM
Driver Amp	29 - 37	16 / -	16	-	6 / 60	Die	TGA4510

NOTES: * = New, SB = Self Biased, AGC = Automatic Gain Control, PD = Power Detector

Amplifiers (cont.)

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
2W HPA	30 - 40	31.5 (33) / –	20	–	6 / 1050	Die	TGA4516
MPA	32 - 45	24 (25) / 33	16	–	6 / 175	Die	TGA4521
MPA	33 - 47	27 (27.5) / 36	18	–	6 / 400	Die	TGA4522
HPA	37 - 40	28 / 38	24	–	5 / 600	Die	TGA4538
HPA	36 - 40	26 / –	15	–	5 - 7 / 240	Die	TGA1073C-SCC
HPA	36 - 40	30 / –	14	–	6 - 7 / 500	Die	TGA1171-SCC

Low Noise Amplifiers

Description	Frequency Range (GHz)	P1dB / IIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
LNA, AGC	2 - 18	18 / 29	17	2	5 / 75	Die	TGA2525
LNA, AGC	2 - 20	19 / –	17.5	2.5	5 / 100	Die	TGA2526
LNA, AGC	2 - 20	17.5 / –	9	3.5	5 - 8 / 60	Die	TGA1342-SCC
LNA, AGC	2 - 20	16 / –	17	2.5	5 / 75	4x4 QFN	TGA2513-SM
LNA, AGC	2 - 23	17 / 26	17	2	5 / 75	Die	TGA2513
LNA, SB, AGC	4 - 14	6 / 16	22	2.3	5 / 90	4x4 QFN	TGA2512-1-SM
LNA, AGC, GB	4 - 14	13 / 24	25	2.3	5 / 160	4x4 QFN	TGA2512-2-SM
LNA, SB, AGC	5 - 15	6 / 13	27	1.4	5 / 90	Die	TGA2512
LNA, SB	6 - 13	11 / –	26	1.5	5 / 65	Die	TGA8399B-SCC
LNA, SB, AGC	6 - 14	6 / 12	20	1.3	5 / 90	Die	TGA2511
LNA	20 - 27	12 / –	21	2.2	3.5 / 60	Die	TGA4506
LNA	28 - 36	12 / 21	22	2.3	3 / 60	Die	TGA4507
LNA	30 - 42	14 / –	21	2.8	3 / 40	Die	TGA4508
LNA	57 - 69	–	13	4	3 / 41	Die	TGA4600

NOTES: SB = Self Biased, AGC = Automatic Gain Control, GB = Gate Bias

Discrete Transistors

Description	Frequency Range (GHz)	P1dB (Psat) (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style	Part Number
24mm HFET	DC - 4	40	13	– / 51	8 / 2170	Die	TGF4124
18mm HFET	DC - 6	38.5	13.5	– / 53	8 / 1690	Die	TGF4118
12mm HFET	DC - 8	37	14	– / 55	8 / 750	Die	TGF4112
4.8mm HFET	DC - 10.5	34	8.5	– / 53	8 / 200	Die	TGF4250-SCC
9.6mm HFET	DC - 10.5	37	9.5	– / 52	8.5 / 520	Die	TGF4260-SCC
1.2mm HFET	DC - 12	28.5	10	– / 55	8 / 50	Die	TGF4230-SCC
2.4mm HFET	DC - 12	31.5	10	– / 56	8 / 100	Die	TGF4240-SCC
1mm Pwr pHEMT	DC - 12	(31.5)	11	– / 55	12 / 900	Die	TGF2021-01
2mm Pwr pHEMT	DC - 12	(34.5)	11	– / 55	12 / 150	Die	TGF2021-02
4mm Pwr pHEMT	DC - 12	(37.5)	11	– / 55	12 / 300	Die	TGF2021-04
8mm Pwr pHEMT	DC - 12	(40.2)	11	– / 55	12 / 600	Die	TGF2021-08
12mm Pwr pHEMT	DC - 12	(42)	11	– / 52	12 / 900	Die	TGF2021-12
0.3mm MESFET	DC - 18	13	11	1.5 / –	3 / 15	Die	TGF1350-SCC
0.6mm Pwr pHEMT	DC - 20	(29)	13	– / 56	12 / 45	Die	TGF2022-06
1.2mm Pwr pHEMT	DC - 20	(32)	13	– / 56	12 / 90	Die	TGF2022-12
2.4mm Pwr pHEMT	DC - 20	(35)	13	– / 58	12 / 180	Die	TGF2022-24
4.8mm Pwr pHEMT	DC - 20	(38)	13	– / 58	12 / 360	Die	TGF2022-48
6mm Pwr pHEMT	DC - 20	(39)	12.5	– / 53	12 / 448	Die	TGF2022-60
0.3mm pHEMT	DC - 22	16	13	0.8 / –	3 / 15	Die	TGF4350

Switches

Description	Frequency Range (GHz)	Insertion Loss (dB)	Isolation (dB)	P1dB (dBm)	Control Voltage (V)	Package Style (mm)	Part Number
SP2T 802.11 a, b, g	DC - 6	0.6	28	31.5	3 / 0	1.3x2 DFN	TGS5200
SPDT FET	DC - 18	1.5	36	27	-5	Die	TGS2306
SPDT FET	DC - 18	2	39	21	-7 / 0	Die	TGS8250-SCC
SP3T VPIN	1 - 20	0.5	35	23	10 mA	Die	TGS2303
SP4T VPIN	1 - 20	0.6	38	23	10 mA	Die	TGS2304-SCC
SP3T VPIN	4 - 18	1	35	20	+/- 2.7	Die	TGS2313
SPDT VPIN	4 - 20	0.9	35	>20	+/- 2.7	Die	TGS2302
SPDT VPIN	24 - 43	<2	36	27	+/- 5	Die	TGS4301
SPDT VPIN	27 - 46	0.9	30	>34	+/- 5 / 15	Die	TGS4302
SPDT VPIN Absorptive	32 - 40	1	36	>33	+/- 5 / 18	Die	TGS4304

Frequency Converters & Mixers

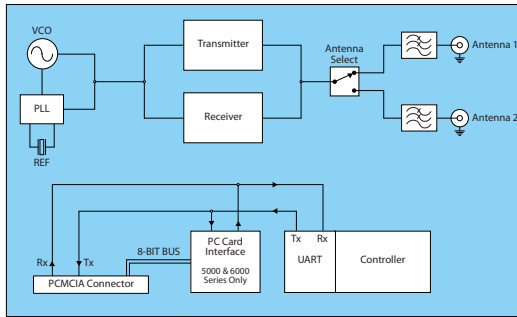
Description	RF Frequency Range (GHz)	Conversion Gain (dB)	LO / RF Isolation (dB)	IIP3 (dBm)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
Doubler w/Amplifier	16 - 30	18	30	-	5 / 150	Die	TGC4403
Doubler w/Amplifier	16 - 30	18	30	-	5 / 150	4x4 QFN	TGC4403-SM
Upconverting Mixer	17 - 26	-9	40	-	-0.9 / 0	4x4 QFN	TGC4402-SM
Upconverting Mixer	17 - 27	-9	35	18	-0.9 / 0	Die	TGC4402
Upconverter	17 - 27	13	30	-	5 / 425	Die	TGC4405
Upconverter	17 - 27	13	30	-	5 / 425	4x4 QFN	TGC4405-SM
Gain Block & 2x / 3x Multiplier	17 - 37	9	-	6	5 / 140	3x3 QFN	TGA4030-SM
Gain Block & 2x / 3x Multiplier	17 - 40	9	-	2	5 / 140	3x3 QFN	TGA4031-SM
Doubler (Input 10 - 20 GHz)	20 - 40	-12	25	18	-	Die	TGC1430F
Tripler (Input 8.5 - 13.5 GHz)	20 - 40	-15	15	18	-	Die	TGC1430G

Control Products

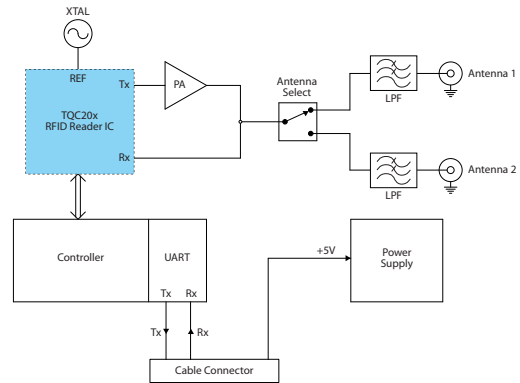
Description	Frequency Range (GHz)	Insertion Loss (dB)	Control Range (dB)	P1dB (dBm)	Supply Voltage (V)	Package Style (mm)	Part Number
Discrete Thru (0 dB Attenuator)	DC - 65	0	0	-	-	Die	TGL4201-00
Analog Attenuator	DC - >50	2	17	-	0 to -2	Die	TGL4203
Analog Attenuator	DC - 30	2	17	-	0 to -2	3x3 QFN	TGL4203-SM
Discrete Attenuators	DC - 65	-	2, 3, 6, 10	-	-	Die	TGL4201-02, 03, 06, 10
Analog Attenuator	2 - 20	2	15	23	2.5	Die	TGL8784-SCC
Passive Wideband Limiter	3 - 25	<0.5	-	18	-	Die	TGL2201
Langue Coupler	12 - 21	<0.25	-	-	-	Die	TGB2001
Langue Coupler	18 - 32	<0.25	-	-	-	Die	TGB4001
Langue Coupler	27 - 45	<0.25	-	-	-	Die	TGB4002

Filters

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
High Selectivity IF Filter	140	1.5	12.1	SE and BAL	48 @ 143	9.1x4.8	856691
High Selectivity IF Filter	140	3	13.6	SE and BAL	46 @ 144	9.1x4.8	856692
High Selectivity IF Filter	140	6	11	BAL / BAL	39 @ 147	9.1x4.8	856693
High Selectivity IF Filter	140	7	13.6	SE and BAL	43 @ 147	9.1x4.8	856694
High Selectivity IF Filter	140	10	10	BAL / BAL	41 @ 152.5	9.1x4.8	856695
High Selectivity IF Filter	140	14	8.5	SE and BAL	43 @ 155	9.1x4.8	856696
High Selectivity IF Filter	140	20	9.8	BAL / BAL	40 @ 158.5	9.1x4.8	856697
High Selectivity IF Filter	140	28	18	SE and BAL	42 @ 168	9.1x4.8	856698



WJR Series Functional Block Diagram



WJM Series Application Block Diagram

UHF RFID Modules

Description	Frequency Range (MHz)	Channels / Spacing (kHz)	Max Output Power (W)	Protocol Support	Region of Operation	Interface	Part Number
Reader PCMCIA Form Factor Module (ETSI 302.208)	865.7 - 867.5	4 / 600	1	ISO18000-6B & -6C	Europe	Serial TTL	WJR7081
Reader PCMCIA Form Factor Module (FCC Pt 15)	902.75 - 927.25	50 / 500	1	ISO18000-6C	N. America	Serial TTL	WJR7000
Embedded Reader Module (FCC Pt 15)	902.75 - 927.25	50 / 500	1	ISO18000-6B & -6C	N. America	Serial TTL	WJM3000
Embedded Reader Module (FCC Pt 15)	902.75 - 927.25	50 / 500	0.25	ISO18000-6B & -6C	N. America	Serial TTL	WJM1000
PCMCIA Form Factor Module	910.6 - 913.4	15 / 200	1	ISO18000-6B & -6C	Korea	Serial TTL	WJR7090
PCMCIA Reader Module (FCC Pt 15)	902.75 - 927.25	50 / 500	0.5	ISO18000-6B & -6C	N. America	PCMCIA	WJR6000

GUIDE BY MARKET | **Space**

Qualified Amplifiers

TriQuint has a proud space / aerospace history, supplying highly-reliable active / acoustic devices for satellite and planetary missions. Space qualification includes high-level visual inspection, 100% element electrical results and wafer lot qualification testing. See tables for standard products already space qualified; most foundry and standard products throughout this brochure may be space qualified.

Qualified Amplifiers

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
12.5 Gb/s NRZ Driver	DC - 18	24 / -	16	3.5 / -	5 - 8 / 70 - 175	Die	TGA1328-SCC
Wideband Driver (40 Gb/s)	DC - 35	18 / -	12	-	5 / 135	Die	TGA4832
Gain Block, SB	2 - 10	17 / -	17	6 / -	5 / 90	Die	TGA8810-SCC
Gain Block	2 - 18	20 / -	7.5	5.5 / -	6 / 100	Die	TGA8300-SCC
Wideband Gain Block, AGC	2 - 20	20 / -	7.5	7 / -	6 / 150	Die	TGA8622-SCC
Wideband PA, AGC	2 - 20	26 / -	8	-	8 / 440	Die	TGA8334-SCC
0.5W PA	6 - 18	27 / -	11	8 / -	8 / 400	Die	TGA8014-SCC
HPA	6.5 - 11.5	37 (39) / -	19	- / 35	7 - 9 / 1200	Die	TGA9083-SCC
Wideband Driver Amp	8 - 18	13 / -	17	5 / -	4.5 / 50	Die	TGA8399C
HPA	9 - 10.5	(38) / -	20	- / >38	4 - 9 / 2000	Die	TGA2704
Driver Amp, SB	11 - 17	17 / -	23	6 / -	6 / 75	4x4 QFN	TGA2507-SM

NOTES: SB = Self Biased, AGC = Automatic Gain Control

Qualified Amplifiers (cont.)

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
Driver Amp, SB	12 - 18	20 / –	28	6 / –	6 / 80	Die	TGA2507
2W HPA	12.5 - 17	(34) / –	26	– / 25	7.5 / 650	Die	TGA2510*
4W HPA, Balanced	13 - 17	(36) / 44	25	– / 30	6 - 7 / 1300	Die	TGA2502
2W HPA	18 - 23	32 (33) / 39	26	–	7 / 840	Die	TGA4022*
Gain Block	19 - 38	(22) / 30	20	–	5 / 160	Die	TGA4036
HPA	24 - 31	35.5 (36) / –	23	–	6 / 2100	Die	TGA4505
3.5W HPA	31 - 37	(35.5) / –	20	–	6 / 2000	Die	TGA4517
MPA	32 - 45	24 (25) / 33	16	–	6 / 175	Die	TGA4521
HPA	36 - 40	30 / –	14	–	6 - 7 / 500	Die	TGA1171-SCC*

NOTES: * = **Newly Qualified**, SB = Self Biased**Qualified Low Noise Amplifiers**

Description	Frequency Range (GHz)	P1dB (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style	Part Number
LNA, AGC	DC - 14	16	11	3.1	8 / 80	Die	TGA8349-SCC
LNA, AGC	2 - 18	16	19	4	5 / 120	Die	TGA8344-SCC
LNA, AGC	2 - 20	17.5	9	3.5	5 - 8 / 60	Die	TGA1342-SCC
LNA, AGC	2 - 20	17.5	9	3.5	5 - 8 / 60	Die	TGA8310-SCC
LNA, SB	6 - 13	11	26	1.5	5 / 65	Die	TGA8399B-SCC
LNA	20 - 27	12	21	2.2	3.5 / 60	Die	TGA4506
LNA	28 - 36	12 / 21	22	2.3	3 / 60	Die	TGA4507*
LNA	30 - 42	14	21	2.8	3 / 40	Die	TGA4508

NOTES: * = **Newly Qualified**, SB = Self Biased, AGC = Automatic Gain Control**Qualified Frequency Converters & Mixers**

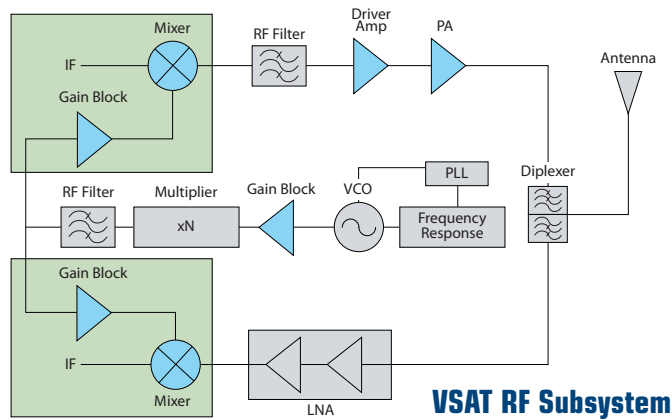
Description	RF Frequency Range (GHz)	Conversion Gain (dB)	LO / RF Isolation (dB)	IIP3 (dBm)	Voltage / Current (V / mA)	Package Style	Part Number
Tripler (Input 8.5 - 13.5 GHz)	20 - 40	-15	15	18	–	Die	TGC1430G

Qualified Optical Drivers

Description	Frequency Range (GHz)	Power	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style	Part Number
12.5 Gb/s NRZ Driver	DC - 18	6 - 8Vpp	16	3.5	5 - 8 / 70 - 175	Die	TGA1328-SCC
Wideband Driver (40 Gb/s)	DC - 35	4Vpp	12	–	5 / 135	Die	TGA4832

Qualified Control Products

Description	Frequency Range (GHz)	Insertion Loss (dB)	Control Range (dB)	P1dB (dBm)	Supply Voltage (V)	Package Style	Part Number
Analog Attenuator	DC - >50	2	17	–	0 to -2	Die	TGL4203
Analog Attenuator	2 / 20	2 - 20	15	23	2.5	Die	TGL8784-SCC



Amplifiers

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
Driver Amp, SB	11 - 17	17 / -	23	6 / -	6 / 75	4x4 QFN	TGA2507-SM
Driver Amp, SB	12 - 18	14 / -	17	-	6 / 40	Die	TGA2506
Driver Amp, SB	12 - 18	20 / -	28	6 / -	6 / 80	Die	TGA2507
1W HPA	12 - 19	30 / -	30	-	5 - 7 / 435	Die	TGA2508
HPA	12 - 19	29 / -	25	-	5 - 7 / 435	4x4 QFN	TGA2508-SM
2W HPA	12.3 - 15.7	(31) / -	33	7 / -	6 / 850	Die	TGA2520
2W HPA	12.5 - 16	(32) / 37	32	-	6 - 7 / 680	4x4 QFN	TGA2503-SM
2W HPA	12.5 - 17	(34) / -	26	- / 25	7.5 / 650	Die	TGA2510
2W HPA	12.5 - 17	(33.5) / -	25	- / 25	7.5 / 650	9.4x6.4 SG	TGA2510-SG
4W HPA	13 - 15	(36) / 41	25	-	7 / 1300	8.4x17.8 FL	TGA8659-FL
6.5W HPA	13 - 16	(38) / -	24	-	8 / 2600	11.4x17.3 FL	TGA2514-FL
2W HPA	13 - 17	(34) / 40	32	-	6 - 7 / 680	Die	TGA2503
2W HPA	13 - 17	(34) / -	25	-	6 - 7 / 640	Die	TGA2505
2W HPA	13 - 17	(34) / -	33	-	5 - 8 / 680	8.4x17.8 FL	TGA2904-FL
2W HPA	13 - 17	(34) / 40	33	-	5 - 8 / 680	9.4x6.4 SG	TGA8658-SG
2W HPA, PD	13 - 17	(34) / 38.5	26	- / 30	7.5 / 650	9.4x6.4 SG	TGA2902-1-SG
4W HPA, Balanced	13 - 17	(36) / 44	25	- / 30	6 - 7 / 1300	Die	TGA2502
6.5W HPA	13 - 18	(38) / 44	24	-	8 / 3600	Die	TGA2514
2W HPA, PD	13.75 - 14.5	(34) / 38.5	26	- / 30	7.5 / 650	9.4x6.4 SG	TGA2902-2-SG
4W HPA	24 - 31	35.5 (36) / -	23	-	6 / 2100	Die	TGA4505
4W HPA	25 - 31	35.5 (36) / -	22	-	6 / 2100	13.34x9.65 CP	TGA4905-CP
MPA	25 - 35	25 / -	18	-	6 / 220	4x4 QFN	TGA4902-SM
7W HPA	26 - 31	(38.5) / -	22	-	6 / 4200	13.4x16.5 CP	TGA4915-CP
1W HPA	27 - 31	30 / -	22	- / 25	4 - 6 / 420	Die	TGA4509
2W HPA	27 - 31	32.5 (33) / 36.5	20	- / 25	6 / 840	Die	TGA4513
MPA	27 - 32	24 / -	15	-	5 / 170	4x4 QFN	TGA4903-SM
1W HPA	28 - 31	30 / -	19	- / 25	6 / 420	4x4 QFN	TGA4509-SM
4W HPA	28 - 31	36 (36.5) / -	22	- / 22	6 / 1600	Die	TGA4906
4W HPA	28 - 31	36 (36.5) / -	22	- / 22	6 / 1600	5x5 QFN	TGA4906-SM
7W HPA	28 - 31	(38.5) / -	22	- / 20	6 / 3200	Die	TGA4916
Driver Amp	28 - 32	17 / 24	14.5	-	6 / 60	3x3 QFN	TGA4512-SM
Driver Amp	29 - 37	16 / -	16	-	6 / 60	Die	TGA4510

NOTES: SB = Self Biased, PD = Power Detector

Frequency Converters & Mixers

Description	RF Frequency Range (GHz)	Conversion Gain (dB)	LO / RF Isolation (dB)	IIP3 (dBm)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
Doubler w/Amplifier	16 - 30	18	30	-	5 / 150	Die	TGC4403
Doubler w/Amplifier	16 - 30	15	25	-	5 / 150	4x4 QFN	TGC4406-SM

Up to 1W

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage Current (V / mA)	Package Style (mm)	Part Number
CATV Gain Block, Flex Gain	DC - 2	21 / 38	16 - 21	2 / -	5 - 8 / 100	SOT89	TAT7457*
12.5 Gb/s NRZ Driver	DC - 18	24 / -	16	3.5 / -	5 - 8 / 70 - 175	Die	TGA1328-SCC
12.5 Gb/s NRZ Driver	DC - 18	25 / -	16	3.5 / -	8 / 175	8.9x8.9 SL	TGA8652-SL
Wideband Driver (40 Gb/s)	DC - 35	18 / -	12	-	5 / 135	Die	TGA44832
CATV TIA / Gain Block, SB	0.04 - 1	27 / 46	20	1.5 / -	8 / 350	5x5 QFN	TGA2806-SM
CATV Gain Block	0.04 - 1	28 / -	18.5	2.5 / -	6 / 318	5x5 QFN	TGA2807-SM
On-Chip Linearized Amplifier DOCSIS® 3.0 Out	0.04 - 1	- / 43	17	4.7 / -	5 / 380	SOIC-8	TAT7467H
MESFET Amplifier	0.05 - 1	20 / 40	14.8	3.5 / -	5 / 150	SOT89	AH2
Dual HBT Amplifier	0.05 - 1	20 / 37	13.5	4.5 / -	>7 / 165	SOIC-8	AG606
Dual MESFET Amplifier	0.05 - 1	25.5 / 43	11.1	4.5 / -	5 / 320	SOIC-8	AH22S
MESFET IF Amplifier	0.05 - 1	22 / 42	19	2.2 / -	5 / 150	SOT89	AH31
Fiber to the Home TIA + Output Amp	0.05 - 1	-60 dBc CTB / CSO	38	2.9 pA / rHz EIN	10 - 12 / 120	4x4 QFN	TAT6254B*
Fiber to the Home TIA + Output Amp (RFoG)	0.05 - 1	-62 dBc CTB / CSO	32	3.9 pA / rHz EIN	5, 12 / 200, 130	4x4 QFN	TAT6254D
Fiber to the Home TIA + Output Amp (Hi Out)	0.05 - 1	-63 dBc CTB / CSO	33	3.9 pA / rHz EIN	5, 12 / 200, 130	4x4 QFN	TAT6254C
Dual pHEMT Amplifier, High Gain	0.05 - 1	- / 38	17.5	3.2 / -	5 / 235	SOIC-8	TAT7469
CATV Gain Block, High Gain, MOCA Multi	0.05 - 1	- / 41	22.5	2 / -	8 / 190	SOT89	TAT7430B
CATV Gain Block, High Gain, MOCA	0.05 - 1	- / 39	18	2 / -	6 / 145	SOT89	TAT7427
CATV Gain Block	0.05 - 1	- / 39	16	2.7 / -	6 / 130	SOT89	TAT7461
MESFET Amplifier	0.05 - 1.5	26.5 / 47	13.5	3.5 / -	9 / 200	SOT89	AH101
Dual pHEMT Amplifier	0.05 - 2	- / 41	13	4 / -	6 / 190	SOIC-8	TAT7466
30 dBm MESFET Amplifier	0.05 - 2.2	30 / 47	17	2.5 / -	11 / 330	6x6 QFN	AH202
Dual pHEMT Amplifier, Wideband	0.05 - 2.6	-77 dBc CTB / -83 dBc CSO	13	4.4 / -	5 / 160	SOIC-8	TAT7464
CATV Gain Block, Wideband	0.05 - 2.6	- / 36	16.5	2.5 / -	5 / 100	SOT89	TAT7460
24 dBm HBT Amplifier	0.06 - 2.5	24 / 40	19	5 / -	5 / 150	SOT89	AH114
MESFET Amplifier, 2-Stage	0.06 - 2.7	27 / 46	29	2.5 / -	4.5; 9 / 275	SOIC-8	AH103A
MESFET Gain Block	0.06 - 3	15 / 32	14	2.4 / -	4.5 / 50	SOT89	AG101
MESFET Gain Block	0.06 - 3	18 / 36	14	2.4 / -	4.5 / 70	SOT89	AG102
MESFET Gain Block	0.06 - 3	18 / 39	14	2.4 / -	4.5 / 78	SOT89	AM1
24.7 dBm HBT Amplifier	0.06 - 3.5	24.7 / 40	19.5	4 / -	5 / 160	SOT89	AH118
24.5 dBm HBT Amplifier	0.05 - 4	24.5 / 41.4	21	4.5 / -	5 / 88	SOT89	TQP7M9101*
25 dBm HBT Amplifier	0.06 - 3.5	25 / 40	19.5	4.6 / -	5 / 115	SOT89	AH128
MESFET Dual Amplifier	0.15 - 3	24 / 46	12	4.1 / -	5 / 300	SOIC-8	AH11
MESFET Amplifier	0.25 - 4	21.5 / 42	14	3.2 / -	5 / 150	SOT89	AH1
MESFET Amplifier	0.35 - 3	27 / 46	14.5	3.1 / -	9 / 200	SOT89	AH102A
27.5 dBm HBT Amplifier	0.4 - 4	27.5 / 44	21	4 / -	5 / 140	SOT89	TQP7M9102*
28.5 dBm HBT Amplifier	0.4 - 3.6	28.5 / 45	20	4.5 / -	5 / 150	SOT89	AH125
28 dBm HBT Amplifier	0.7 - 3.8	28 / 42	28.5	2.9 / -	5 / 225	4x4 QFN	TQP8M9013
28.7 dBm HBT Amplifier	0.8 - 1	28.7 / 43	17.5	7 / -	5 / 250	SOIC-8	AH116
28.5 dBm HBT Amplifier	1.8 - 2.3	28.5 / 44	14.5	6 / -	5 / 250	SOIC-8	AH115
Wideband PA, AGC	2 - 20	26 / -	8	-	8 / 440	Die	TGA8334-SCC
Wideband PA, AGC	2 - 22	28.5 (30) / 36	17	-	12 / 1100	Die	TGA2509
Bluetooth® Class 1 PA	2.4 - 2.5	21.5 / -	27	- / 50	0 - 3.3 / 160	2x2 QFN	TQP770001
WiMAX Driver Amp / PA, SB	3.4 - 3.8	30 / 42	24	-	6 / 770	5x5 QFN	TGA2703-SM
0.5W PA	6 - 18	27 / -	11	8 / -	8 / 400	Die	TGA8014-SCC
Driver Amp	7 - 13	(30) / 37	25	- / 30	9 / 450	Die	TGA2700
Wideband Driver Amp	8 - 18	13 / -	17	5 / -	4.5 / 50	Die	TGA8399C
Driver Amp	12 - 16	26 (26.5) / 37	23	7 / -	5 / 300	3x3 QFN	TGA2524-SM*
1W HPA	12 - 19	30 / -	30	-	5 - 7 / 435	Die	TGA2508
HPA	12 - 19	29 / -	25	-	5 - 7 / 435	4x4 QFN	TGA2508-SM

NOTES: * = New, SB = Self Biased, AGC = Automatic Gain Control

Up to 1W (cont.)

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
1W HPA, PD	17 - 20	30 (32) / 42	20	–	5 - 7 / 825	Die	TGA4530
Driver Amp	17 - 24	22 / –	19	4 / –	5 / 270	4x4 QFN	TGA2521-SM
HPA, AGC, PD	17 - 24	(29) / 38	22	–	5 / 712	4x4 QFN	TGA2522-SM
HPA	17 - 27	29 (31) / 37	22	–	7 / 760	Die	TGA4502-SCC
HPA	18 - 27	29 / 37	14	–	6 / 480	Die	TGA1135-SCC
MPA	19 - 27	25 / 32	22	–	5 - 7 / 220	Die	TGA1073G-SCC
MPA	25 - 35	25 / –	18	–	6 / 220	4x4 QFN	TGA4902-SM
MPA	26 - 35	25 (32) / –	19	–	5 - 7 / 220	Die	TGA1073A-SCC
1W HPA	27 - 31	30 / –	22	– / 25	4 - 6 / 420	Die	TGA4509
MPA	27 - 32	24 / –	15	–	5 / 170	4x4 QFN	TGA4903-SM
HPA	27 - 32	28.5 / –	25	–	6 - 8 / 420	Die	TGA1073B-SCC
1W HPA	28 - 31	30 / –	19	– / 25	6 / 420	4x4 QFN	TGA4509-SM
Driver Amp	28 - 32	17 / 24	14.5	–	6 / 60	3x3 QFN	TGA4512-SM
Driver Amp	29 - 37	16 / –	16	–	6 / 60	Die	TGA4510
MPA	32 - 45	24 (25) / 33	16	–	6 / 175	Die	TGA4521
HPA	36 - 40	26 / –	15	–	5 - 7 / 240	Die	TGA1073C-SCC
HPA	36 - 40	30 / –	14	–	6 - 7 / 500	Die	TGA1171-SCC
MPA	33 - 47	27 (27.5) / 36	18	–	6 / 400	Die	TGA4522
HPA	37 - 40	28 / 38	24	6 / –	5 / 600	Die	TGA4538
0.5W HPA	40 - 45	28 / –	9	–	7 / 500	Die	TGA4043
Driver Amp	41 - 45	18 / –	14	–	6 / 168	Die	TGA4042

NOTES: AGC = Automatic Gain Control, PD = Power Detector

1W to 4W

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
31 dBm HBT Amplifier	0.4 - 2.3	31 / 46	18	7 / –	5 / 450	4x4 QFN	ECP100
33 dBm HBT Amplifier	0.4 - 2.3	33 / 49	18	8 / –	5 / 800	4x4 QFN	ECP200
31 dBm HBT Amplifier	0.4 - 2.3	31 / 46	18	7 / –	5 / 450	SOIC-8	AH215
33 dBm HBT Amplifier	0.4 - 2.3	33 / 49	18	8 / –	5 / 800	SOIC-8	AH312
31.5 dBm HBT Amplifier	0.4 - 2.7	31 / 47	20	5.9 / –	5 / 300	SOIC-8	AH225
33.5 dBm HBT Amplifier	0.4 - 2.7	33.5 / 50	19	4.6 / –	5 / 500	SOIC-8	AH322
35.5 dBm HBT Amplifier	0.4 - 2.7	35.5 / 50	16	7 / –	5 / 800	4x5 DFN	AH420
33 dBm HBT Amplifier	0.7 - 2.7	33 / 50	27.5	7 / –	5 / 680	5x5 QFN	AH323
InGaP HBT PA, 1.8W, Ultra High Linearity	0.8 - 2.35	32.5 / 49	15.8	– / 55	28 / 40	5x6 DFN	AP601
InGaP HBT PA, 3.7W, Ultra High Linearity	0.8 - 2.35	35.7 / 52	15.5	– / 55	28 / 80	5x6 DFN	AP602
30 dBm HBT Amplifier	1.8 - 2.7	30.5 / 46.5	27	5.5 / –	5 / 400	SOIC-8 / 4x5 DFN	AH212
33 dBm HBT Amplifier	3.3 - 3.8	33 / –	25	–	5 / 600	5x5 QFN	AH315
2W HPA	5.5 - 8.5	32 (34) / 41	30	7 / –	6 / 1260	5x5 QFN	TGA2706-SM
2.5W HPA	5.9 - 8.5	34 (35) / 42	18	7.5 / 37	6 / 1000	6x6 QFN	TGA2701-SM
2.8W HPA	6 - 18	(34.5) / –	24	– / 20	7 - 9 / 800 - 1200	Die	TGA2501
HPA	6 - 18	(34.5) / –	24	– / 20	8 / 1200	Die	TGA9092-SCC
2W HPA	12.3 - 15.7	(31) / –	33	7 / –	6 / 850	Die	TGA2520
2W HPA	12.5 - 16	(32) / 37	32	–	6 - 7 / 680	4x4 QFN	TGA2503-SM
2W HPA	12.5 - 17	(34) / –	26	– / 25	7.5 / 650	Die	TGA2510
2W HPA	12.5 - 17	(33.5) / –	25	– / 25	7.5 / 650	6.4x9.4 SG	TGA2510-SG
2W HPA	12.7 - 15.4	34 (35) / 43	28	6 / –	6 / 1300	Die	TGA2533*
2W HPA	12.7 - 15.4	33 (34.5) / 43	27	6 / –	6 / 1300	5x5 QFN	TGA2533-SM*
4W HPA	13 - 15	(36) / 41	25	–	7 / 1300	17.8x8.4 FL	TGA8659-FL
2W HPA	13 - 17	(34) / 40	32	–	6 - 7 / 680	Die	TGA2503
2W HPA	13 - 17	(34) / –	25	–	6 - 7 / 640	Die	TGA2505
2W HPA, PD	13 - 17	(34) / 38.5	26	– / 30	7.5 / 650	6.4x9.4 SG	TGA2902-1-SG

NOTES: * = New, PD = Power Detector

1W to 4W (cont.)

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
2W HPA	13 - 17	(34) / –	33	–	5 - 8 / 680	17.8x8.4 FL	TGA2904-FL
2W HPA	13 - 17	(34) / 40	33	–	5 - 8 / 680	6.4x9.4 SG	TGA8658-SG
2W HPA, PD	13.75 - 14.5	(34) / 38.5	26	– / 30	7.5 / 650	6.4x9.4 SG	TGA2902-2-SG
HPA	17 - 20	30.5 / 41	23	– / –	6 / 900	Die	TGA4532
HPA	17 - 20	31 (32) / 41	22	6.5 / –	6 / 820	4x4 QFN	TGA4532-SM
HPA	17 - 24	31 (32) / 40	23	6 / –	7 / 720	Die	TGA4531
2W HPA	18 - 23	32 (33) / 39	26	–	7 / 840	Die	TGA4022
HPA	21 - 24	31 (32) / 41	22	6 / –	6 / 880	4x4 QFN	TGA4533-SM*
4W HPA	24 - 31	35.5 (36) / –	23	–	6 / 2100	Die	TGA4505
4W HPA	25 - 31	35.5 (36) / –	22	–	6 / 2100	13.34x9.65 CP	TGA4905-CP
2W HPA	27 - 31	32.5 (33) / 36.5	20	– / 25	6 / 840	Die	TGA4513
3.5W HPA	30-38	(35) / –	18	– / 20	6 / 2100	Die	TGA2575*
2W HPA	30 - 40	31.5 (33) / –	20	–	6 / 1050	Die	TGA4516
2W HPA	31 - 35	31.5 (33.5) / –	19	–	6 - 7 / 1150	Die	TGA4514
3.5W HPA	31 - 37	(35.5) / –	20	–	6 / 2000	Die	TGA4517
2W HPA	41 - 47	(33) / –	16	–	6 / 2000	Die	TGA4046
77 GHz MPA	76 - 80	14 / –	12	–	3.5 / 75	Die	TGA4706-FC

NOTES: * = New, PD = Power Detector

More Than 4W

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	PAE (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
10W HPA	0.03 - 3	39.5 / 43	19.5	40	35 / 360	Flange	TGA2540-FL
39 dBm HBT Amplifier	0.7 - 2.9	39 / –	16.5	8	12 / 300	5x6 DFN	AP561
InGaP HBT PA, 7W Ultra High Linearity	0.8 - 2.35	38.5 / 55.5	17	53	28 / 160	5x6 DFN	AP603
14W HPA	2 - 18	41.5 / –	10	23	35 / 1200	Die	TGA2573
120W TriPower™ HVHBT Amplifier	2.11 - 2.17	51.1 / –	16.6	64.5	28 / 550	Flanged Screw Down	TG2H214120-FL*
120W TriPower™ HVHBT Amplifier	2.11 - 2.17	51.1 / –	16.6	64.5	28 / 550	Flanged Solder Down	TG2H214120-FS*
220W TriPower™ HVHBT Amplifier	2.11 - 2.17	53.9 / –	16.4	65.4	28 / 600	Flanged Screw Down	TG2H214220-FL*
30W HPA	2.5 - 6	(45) / –	27	38	30 / 1400	Die	TGA2576*
39 dBm HBT Amplifier	3.3 - 3.8	39 / –	11.5	–	12 / 400	5x6 DFN	AP562
HPA	6.5 - 11.5	37 (39) / –	19	35	7 - 9 / 1200	Die	TGA9083-SCC
16W HPA	6.5 - 12.5	42 / –	27	35	12 / 3000	Die	TGA2517
HPA	7 - 8.5	(38) / –	21	42	7 / 2000	Die	TGA2701
HPA	9 - 10.5	(38) / –	20	>38	4 - 9 / 2000	Die	TGA2704
HPA	10.5 - 12	(38) / –	19	>39	4 - 9 / 2000	Die	TGA2710
6.5W HPA	13 - 16	(38) / –	24	–	8 / 2600	11.4x17.3 FL	TGA2514-FL
4W HPA, Balanced	13 - 17	(36) / 44	25	30	6 - 7 / 1300	Die	TGA2502
6.5W HPA	13 - 18	(38) / 44	24	–	8 / 3600	Die	TGA2514
20W HPA	14 - 16	(43) / –	19	>30	35 / 2000	Die	TGA2572*
7W HPA	26 - 31	(38.5) / –	22	–	6 / 4200	13.4x16.5 CP	TGA4915-CP
4W HPA	28 - 31	36 (36.5) / –	22	22	6 / 1600	Die	TGA4906
4W HPA	28 - 31	36 (36.5) / –	22	22	6 / 1600	5x5 QFN	TGA4906-SM
7W HPA	28 - 31	(38.5) / –	22	20	6 / 3200	Die	TGA4916

NOTES: * = New

Variable Gain Amplifiers

Description	Frequency Range (GHz)	P1dB / OIP3 (dB)	Gain (dB)	Gain Range (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
Variable Gain Amplifier	0.05 - 2.2	22 / 42	15.5	20	5 / 150	4x4 QFN	VG025
Variable Gain Amplifier	0.7 - 1	22 / 40	16	29	5 / 150	6x6 QFN	VG101
Variable Gain Amplifier	0.7 - 2.8	27.5 / 43	29	30	5 / 240	5x5 QFN	TQM8M9074*
Variable Gain Amplifier	1.8 - 2.7	22 / 39.5	13.5	26.5	5 / 150	6x6 QFN	VG111
Digital Variable Gain Amplifier	1.8 - 2.7	24.5 / 41.5	31	31.5	5 / 200	6x6 QFN	TQM879006*

NOTES: * = New

Gain Block

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
General Purpose Gain Block	DC - 3	18.5 / 33	16.5	3.8	6 / 75	SOT89	AG603
General Purpose Gain Block	DC - 3.5	18.5 / 33	13.6	4.4	6 / 75	SOT89	AG602
General Purpose Gain Block	DC - 3.5	20.5 / 33.5	17.2	3.5	7 / 96	SOT89	EC1078
General Purpose Gain Block	DC - 4	19.5 / 31	18.5	2.9	6 / 70	SOT89	EC1019
General Purpose Gain Block	DC - 4	17.5 / 32	21.5	3.4	6 / 65	SOT89	ECG005
General Purpose Gain Block	DC - 4	23.5 / 37	14.3	4.6	9 / 120	SOT89	ECG008
General Purpose Gain Block	DC - 4	18 / 34.5	15.3	5.5	6 / 70	SOT89	ECG040
General Purpose Gain Block	DC - 5.5	15 / 30	14.2	3.7	5 / 45	SOT86 / SOT363 /	ECG006
General Purpose Gain Block	DC - 6	5.8 / 18.5	11	4.4	5 / 20	SOT86 / SOT363	AG201
General Purpose Gain Block	DC - 6	7.5 / 19.5	17.7	3.1	5 / 20	SOT86 / SOT363	AG203
General Purpose Gain Block	DC - 6	12 / 25	14.3	3.2	5 / 35	SOT86 / SOT363	AG302
General Purpose Gain Block	DC - 6	12.5 / 25	18.4	3	5 / 35	SOT86 / SOT363	AG303
General Purpose Gain Block	DC - 6	16 / 28.5	14.5	3.7	6 / 60	SOT86 / SOT89	AG402
General Purpose Gain Block	DC - 6	16 / 28	18.9	3	6 / 60	SOT86 / SOT89	AG403
General Purpose Gain Block	DC - 6	14.5 / 27.5	19.1	2.9	6 / 45	SOT86 / SOT89	AG503
General Purpose Gain Block	DC - 6	19 / 33	18.2	3.5	6 / 75	SOT86 / SOT89	AG604
General Purpose Gain Block	DC - 6	12.5 / 26	21.4	3.4	5 / 30	SOT363 / SOT89	ECG001
General Purpose Gain Block	DC - 6	15 / 29	19.5	3.7	5 / 45	SOT86 / SOT363 /	ECG002
General Purpose Gain Block	DC - 6	23 / 36	19	3.5	9 / 110	SOT89	ECG003
General Purpose Gain Block	DC - 6	13 / 27	15.5	3.2	5 / 35	SOT89	ECG004
General Purpose Gain Block	DC - 6	18.2 / 32	20.1	3.4	6 / 65	SOT86 / SOT89	ECG055
MESFET IF Gain Block	0.05 - 0.87	20 / 41	13	3	5 / 150	SOT89	AH3
LNA / Gain Block (40 Gb/s)	DC - 40	11.5 / 20	13	3.2	5 / 50	Die	TGA4830
CATV TIA / Gain Block, SB	0.04 - 1	27 / 46	20	1.5	8 / 350	4x4 QFN	TGA2803-SM
+5V Active Bias IF Gain Block	0.05 - 1	20.5 / 33	17.5	5	5 / 95	SOT89	WJA1500
+5V Active Bias IF Gain Block	0.05 - 1	19 / 33.5	17.5	4.7	5 / 65	SOT89	WJA1505
+5V Active Bias IF Gain Block	0.05 - 1	20 / 36	14	5.4	5 / 95	SOT89	WJA1510
+5V Active Bias Gain Block	0.05 - 2.3	19 / 28.5	14	5.2	5 / 85	SOT89	WJA1010
+5V Active Bias Gain Block	0.05 - 3	20 / 34	16.7	5.4	5 / 100	SOT89	WJA1001
E-pHEMT LNA Gain Block	0.05 - 4	21 / 36	20	1.3	5 / 85	SOT89	TQP3M9008
E-pHEMT LNA Gain Block	0.05 - 4	21.4 / 37.5	22	1.1	5 / 85	3x3 QFN	TQP3M9018*
E-pHEMT LNA Gain Block	0.05 - 4	22 / 40	21.5	1.3	5 / 125	SOT89	TQP3M9009
E-pHEMT LNA Gain Block	0.05 - 4	22 / 40.5	24.7	0.9	5 / 125	3x3 QFN	TQP3M9019*
E-pHEMT LNA Gain Block	0.05 - 4	21.5 / 40	15	2.0	5 / 85	SOT89	TQP3M9028*
+5V Active Bias Gain Block	0.05 - 4	20 / 37.5	16.7	5.6	5 / 90	SOT89	WJA1021
+5V Active Bias Gain Block	0.05 - 4	19.3 / 36.5	14.5	5.5	5 / 80	SOT89	WJA1030
E-pHEMT LNA Gain Block	0.5 - 4	22 / 35	19	0.8	5 / 55	3x3 QFN	TQP3M9005*
E-pHEMT LNA Gain Block	0.5 - 4	22.5 / 38.5	18.5	1	5 / 90	3x3 QFN	TQP3M9006*
E-pHEMT LNA Gain Block	0.5 - 4	23.5 / 42	18	1.3	5 / 135	SOT89	TQP3M9007*
Gain Block, SB	2 - 10	17 / -	17	6	5 / 90	Die	TGA8810-SCC
Gain Block	2 - 18	20 / -	7.5	5.5	6 / 100	Die	TGA8300-SCC

NOTES: * = New, SB = Self Biased

Gain Block

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
Wideband Gain Block, AGC	2 - 20	20 / –	7.5	7	6 / 150	Die	TGA8622-SCC
Gain Block	6 - 18	12.5 / –	13	5	5 / 80	Die	TGA8035-SCC
Driver Amp, SB	11 - 17	17 / –	23	6	6 / 75	4x4 QFN	TGA2507-SM
Driver Amp, SB	12 - 18	14 / –	17	–	6 / 40	Die	TGA2506
Driver Amp, SB	12 - 18	20 / –	28	6	6 / 80	Die	TGA2507
Gain Block & 2x / 3x Multiplier	17 - 37	18 (22) / 26	20	7	5 / 140	3x3 QFN	TGA4030-SM
Gain Block & 2x / 3x Multiplier	17 - 40	18 (22) / 24	22	7	5 / 140	3x3 QFN	TGA4031-SM
Gain Block, Multiplier	17 - 43	22 / –	25	–	5 / 225	Die	TGA4040
Gain Block	19 - 38	(22) / 30	20	–	5 / 160	Die	TGA4036

NOTES: SB = Self Biased, AGC = Automatic Gain Control

Low Noise

Description	Frequency Range (GHz)	P1dB / IIP3 (dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
LNA, AGC	DC - 14	16 / –	11	3.1	8 / 80	Die	TGA8349-SCC
LNA / Gain Block (40 Gb/s)	DC - 40	11.5 / 20	13	3.2	5 / 50	Die	TGA4830
E-pHEMT LNA Gain Block	0.05 - 4	21 / 36	20	1.3	5 / 85	SOT89	TQP3M9008
E-pHEMT LNA Gain Block	0.05 - 4	21.4 / 37.5	22	1.1	5 / 85	3x3 QFN	TQP3M9018*
E-pHEMT LNA Gain Block	0.05 - 4	22 / 40	21.5	1.3	5 / 125	SOT89	TQP3M9009
E-pHEMT LNA Gain Block	0.05 - 4	22 / 40.5	24.7	0.9	5 / 125	3x3 QFN	TQP3M9019*
E-pHEMT LNA Gain Block	0.05 - 4	21.5 / 40	15	2	5 / 85	SOT89	TQP3M9028*
E-pHEMT LNA Gain Block	0.5 - 4	22 / 35	19	0.8	5 / 55	3x3 QFN	TQP3M9005*
E-pHEMT LNA Gain Block	0.5 - 4	22.5 / 38.5	18.5	1	5 / 90	3x3 QFN	TQP3M9006*
E-pHEMT LNA Gain Block	0.5 - 4	23.5 / 42	18	1.3	5 / 135	SOT89	TQP3M9007*
LNA, Balanced FET Low Band	0.7 - 0.92	– / 13.5	20.5	0.55	4 / 70	4x4 QFN	TQP3M6004
LNA, Discrete Low Band	0.7 - 0.92	26 / 23.5	16	0.8	5 / 150	SOT89	TGF2021-04-SD
LNA, Balanced FET	0.8 - 3	21 / 11	22	0.7	4 / 100	2x2 QFN	TGA2602-SM
LNA, Balanced FET Mid Band	1.7 - 2	– / 14.4	18	0.55	3.5 / 50	4x4 QFN	TQP3M6005*
LNA, AGC	2 - 18	18 / 29	17	2	5 / 75	Die	TGA2525
LNA, AGC	2 - 18	16 / –	19	4	5 / 120	Die	TGA8344-SCC
LNA, AGC	2 - 20	17.5 / –	9	3.5	5 - 8 / 60	Die	TGA1342-SCC
LNA, AGC	2 - 20	19 / –	17.5	2.5	5 / 100	Die	TGA2526
LNA, AGC	2 - 20	17.5 / –	9	3.5	5 - 8 / 60	Die	TGA8310-SCC
LNA, AGC	2 - 20	16 / –	17	2.5	5 / 75	4x4 QFN	TGA2513-SM
LNA, AGC	2 - 23	17 / 26	17	2	5 / 75	Die	TGA2513
LNA, SB, AGC	4 - 14	6 / 16	22	2.3	5 / 90	4x4 QFN	TGA2512-1-SM
LNA, AGC, GB	4 - 14	13 / 24	25	2.3	5 / 160	4x4 QFN	TGA2512-2-SM
LNA, SB, AGC	5 - 15	6 / 13	27	1.4	5 / 90	Die	TGA2512
LNA, SB	6 - 13	11 / –	26	1.5	5 / 65	Die	TGA8399B-SCC
LNA, SB, AGC	6 - 14	6 / 12	20	1.3	5 / 90	Die	TGA2511
LNA	20 - 27	12 / –	21	2.2	3.5 / 60	Die	TGA4506
LNA	28 - 36	12 / 21	22	2.3	3 / 60	Die	TGA4507
LNA	30 - 42	14 / –	21	2.8	3 / 40	Die	TGA4508
LNA	57 - 69	–	13	4	3 / 41	Die	TGA4600
77 GHz LNA	72 - 80	–	20	5	3.5 / 54	Die	TGA4705-FC

NOTES: * = New, SB = Self Biased, AGC = Automatic Gain Control, GB = Gate Bias

Discrete Transistors

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
MESFET	DC - 2.5	26.5 / –	11	1.72 / 55	2 - 6 / 350	SOT223	CLY5
MESFET	DC - 3	23.5 / –	15.5	1.48 / 55	2 - 6 / 180	MW6	CLY2

Discrete Transistors (cont.)

Description	Frequency Range (GHz)	P1dB (Psat) / OIP3 (dBm)	Gain (dB)	NF / PAE (dB) / (%)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
24mm HFET	DC - 4	40 / -	13	- / 51	8 / 2170	Die	TGF4124
18mm HFET	DC - 6	38.5 / -	13.5	- / 53	8 / 1690	Die	TGF4118
0.5W HFET	DC - 6	28 / 40	18	3.2 / -	8 / 100	SOT89	TGF2960-SD
1W HFET	DC - 6	31 / 43	16	4 / -	8 / 200	SOT89	TGF2961-SD
12mm HFET	DC - 8	37 / -	14	- / 55	8 / 750	Die	TGF4112
4.8mm HFET	DC - 10.5	34 / -	8.5	- / 53	8 / 200	Die	TGF4250-SCC
9.6mm HFET	DC - 10.5	37 / -	9.5	- / 52	8.5 / 520	Die	TGF4260-SCC
1.2mm HFET	DC - 12	28.5 / -	10	- / 55	8 / 50	Die	TGF4230-SCC
2.4mm HFET	DC - 12	31.5 / -	10	- / 56	8 / 100	Die	TGF4240-SCC
1mm Pwr pHEMT	DC - 12	(31.5) / -	11	- / 55	12 / 900	Die	TGF2021-01
2mm Pwr pHEMT	DC - 12	(34.5) / -	11	- / 55	12 / 150	Die	TGF2021-02
4mm Pwr pHEMT	DC - 12	(37.5) / -	11	- / 55	12 / 300	Die	TGF2021-04
8mm Pwr pHEMT	DC - 12	(40.2) / -	11	- / 55	12 / 600	Die	TGF2021-08
12mm Pwr pHEMT	DC - 12	(42) / -	11	- / 52	12 / 900	Die	TGF2021-12
0.3mm MESFET	DC - 18	13 / -	11	1.5 / -	3 / 15	Die	TGF1350-SCC
1.25mm GaN HEMT	DC - 18	(38) / -	15	- / 55	28 / 125	Die	TGF2023-01
2.5mm GaN HEMT	DC - 18	(41) / -	15	- / 55	28 / 250	Die	TGF2023-02
5.0 GaN HEMT	DC - 18	(44) / -	15	- / 55	28 / 500	Die	TGF2023-05
10mm GaN HEMT	DC - 18	(47) / -	15	- / 55	28 / 1000	Die	TGF2023-10
20mm GaN HEMT	DC - 18	(50) / -	15	- / 55	28 / 2000	Die	TGF2023-20
0.6mm Pwr pHEMT	DC - 20	(29) / -	13	- / 56	12 / 45	Die	TGF2022-06
1.2mm Pwr pHEMT	DC - 20	(32) / -	13	- / 56	12 / 90	Die	TGF2022-12
2.4mm Pwr pHEMT	DC - 20	(35) / -	13	- / 58	12 / 180	Die	TGF2022-24
4.8mm Pwr pHEMT	DC - 20	(38) / -	13	- / 58	12 / 360	Die	TGF2022-48
6mm Pwr pHEMT	DC - 20	(39) / -	12.5	- / 53	12 / 448	Die	TGF2022-60
0.3mm pHEMT	DC - 22	16 / -	13	0.8 / -	3 / 15	Die	TGF4350
7W GaN HEMT	DC - 6	(40.4) / -	9.5	- / 50	28 / 50	Ceramic Flat Lead	TIG6000528-Q3
18W GaN HEMT	DC - 6	(43.4) / -	15	- / 50	28 / 50	Ceramic Flat Lead	TIG6001528-Q3*
55W GaN HEMT	DC - 3.5	47.2 / -	15	- / 50	28 / 200	Ceramic Flat Lead	TIG4005528-FS*
MESFET	0.05 - 4	21 / 42	19	2 / -	5 / 140	SOT89	FH1
MESFET	0.05 - 4	18 / 36	19	2 / -	5 / 140	SOT89	FH101
0.5W HFET	0.05 - 4	27 / 40	19	2.7 / -	8 / 125	SOT89	FP1189
1W HFET	0.05 - 4	30 / 44	18	4.5 / -	8 / 250	SOT89	FP2189
2.5W HFET	0.05 - 4	34 / 46	18	3.5 / -	9 / 450	6x6 QFN	FP31QF
30W LDMOS	0.5 - 2	45 / -	10	- / 45	28 / 200	PowerBand™	T1L2003028-SP
10W pHEMT	0.5 - 3	40 / -	10	- / 45	12 / 200	PowerBand™	T1P2701012-SP

NOTES: * = New

Frequency Converters & Mixers

Description	RF Frequency Range (GHz)	Conversion Gain (dB)	LO / RF Isolation (dB)	IIP3 (dBm)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
WB Mixer, LO	0.5 - 2.5	-5.7	8	24	3 - 6 / 6	MW6	CMY210
WB Mixer, LO, IF	0.5 - 2.5	10	8	9	3 - 6 / 12	SCT598	CMY212
WB Mixer, LO, IF, Low Current	0.5 - 2.5	9.5	10	10	3 - 6 / 8	SCT598	CMY213
Mixer, LO	0.7 - 1	-9	17	36	5 / 50	MSOP-8	ML483
Single Branch Converter, RF, LO, IF	0.8 - 0.92	22	60	15	5 / 360	6x6 QFN	CV110-1A
Single Branch Converter, RF, LO, IF	0.8 - 0.96	22	60	15	5 / 360	6x6 QFN	CV110-3A
Dual Branch Converter, LO, IF	0.8 - 0.96	10.5	14	18.5	5 / 390	6x6 QFN	CV210-3A
Mixer, LO	1.5 - 3.2	-8.5	2	35	5 / 40	MSOP-8	ML485
Single Branch Converter, RF, LO, IF	1.7 - 2.0	21	45	17	5 / 360	6x6 QFN	CV111-1A

Frequency Converters & Mixers (cont.)

Description	RF Frequency Range (GHz)	Conversion Gain (dB)	LO / RF Isolation (dB)	IIP3 (dBm)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
Single Branch Converter, RF, LO, IF	1.9 - 2.2	21	40	17	5 / 360	6x6 QFN	CV111-3A
Mixer, LO	1.9 - 2.7	-8.1	9	30	5 / 110	SOIC-8	ML501
Doubler w/Amplifier	16 - 30	18	30	22	5 / 150	Die	TGC4403
Doubler w/Amplifier	16 - 30	18	30	19	5 / 150	4x4 QFN	TGC4403-SM
Upconverting Mixer	17 - 26	-9	40	–	-0.9 / 0	4x4 QFN	TGC4402-SM
Upconverting Mixer	17 - 27	-9	35	18	-0.9 / 0	Die	TGC4402
Upconverter	17 - 27	13	30	–	5 / 425	Die	TGC4405
Upconverter	17 - 27	13	30	–	5 / 425	4x4 QFN	TGC4405-SM
Gain Block & 2x / 3x Multiplier	17 - 37	9	–	6	5 / 140	3x3 QFN	TGA4030-SM
Gain Block & 2x / 3x Multiplier	17 - 40	9	–	2	5 / 140	3x3 QFN	TGA4031-SM
19 GHz VCO w/8:1 Prescaler	18.5 - 19.5	–	-105**	7	5 / 158	Die	TGV2204-FC
Doubler (Input 10 - 20 GHz)	20 - 40	-12	25	18	–	Die	TGC1430F
Tripler (Input 8.5 - 13.5 GHz)	20 - 40	-15	15	18	–	Die	TGC1430G
19 / 38 GHz Converter / MPA	36 - 40	9	–	14.5	3.5 / 65	Die	TGC4703-FC
Down Converting I/Q Mixer	75 - 82	-13.5	22	–	1.1 / 7	Die	TGC4702-FC
38 / 77 GHz Converter / MPA	76 - 77	6	–	15	4 / 230	Die	TGC4704-FC

NOTES: ** = Phase Noise (dBc / Hz @ 1 MHz Offset), LO = LO Amplifier, IF = IF Amplifier

Signal Conditioning

Description	Frequency Range (GHz)	Insertion Loss (dB)	Control Range dB or (Deg.)	PI dB (dBm)	Supply Voltage (V)	Package Style (mm)	Part Number
Through Line	DC - 6	0.1	–	–	–	3x3 QFN	TQM4M9073*
6-Bit, Digital Attenuator, Parallel Ctrl	DC - 4	1.3	31.5	30	5 / 0	4x4 QFN	TQP4M9071
6-Bit, Digital Attenuator, Serial Ctrl	DC - 4	1.3	31.5	30	5 / 0	4x4 QFN	TQP4M9072
Analog Attenuator	DC - 30	2	17	–	0 to -2	3x3 QFN	TGL4203-SM
Analog Attenuator	DC - >50	2	17	–	0 to -2	Die	TGL4203
Discrete Thru (0 dB Attenuator)	DC - 65	0	0	–	–	Die	TGL4201-00
Discrete Attenuators	DC - 65	–	2, 3, 6, 10	–	–	Die	TGL4201-02, 03, 06, 10
Passive Wideband Limiter	2 - 12	<1	–	18	–	3x3 QFN	TGL2201-SM*
Analog Attenuator	2 - 20	2	15	23	2.5	Die	TGL8784-SCC
Passive Wideband Limiter	3 - 25	<0.5	–	18	–	Die	TGL2201
5-Bit Phase Shifter	6 - 18	9	(348)	–	6	Die	TGP6336
Bessel Filter	–	6, 7, 8, 9, 10 & 11 Cut-Off Freq	–	–	–	Die	TGB2010-00, -09 etc.
Bessel Filter	–	5, 6, 6.5, 7.5, 8 & 9 Cut-Off Freq	–	–	–	2x2 QFN	TGB2010-00, -09-SM etc.
6-Bit Phase Shifter	8.5 - 11	5	(354)	–	0 / -5	Die	TGP2103
Lange Coupler	12 - 21	<0.25	–	–	–	Die	TGB2001
5-Bit Phase Shifter	18 - 20	5	(180)	–	-2.5	Die	TGP1439
Lange Coupler	18 - 32	<0.25	–	–	–	Die	TGB4001
Lange Coupler	27 - 45	<0.25	–	–	–	Die	TGB4002
5-Bit Phase Shifter	28 - 32	6	(348)	–	5	Die	TGP2100
5-Bit Phase Shifter	33 - 37	6	(348)	–	-5	Die	TGP2102
1-Bit Phase Shifter	34 - 36	4	180	–	0 / 5	Die	TGP2104

NOTES: * = New

Switches

Description	Frequency Range (GHz)	Insertion Loss (dB)	Isolation (dB)	PI dB (dBm)	Control Voltage (V)	Package Style (mm)	Part Number
SP3T High Power CDMA	DC - 2	0.6	22	34.5	2.6 / 0	2x2 QFN	TQP4M3019
SP2T 802.11 a, b, g	DC - 6	0.6	28	31.5	3 / 0	1.3x2 DFN	TQS5200
Diversity Switch 802.11 a, b, g	DC - 6	0.8	33	33	3 / 0	3x3 QFN	TQS5202
SPDT - GaN	DC - 6	<1	40	45	-40 / 0	Die	TGS2351*
SPDT - GaN	DC - 6	<1	40	45	-40 / 0	4x4 QFN	TGS2351-SM*
SPDT - GaN	DC - 12	<1	35	43	-40 / 0	Die	TGS2352*
SPDT - GaN	DC - 18	<1	30	40	-40 / 0	Die	TGS2353*
SPDT FET	DC - 18	1.5	36	27	-5	Die	TGS2306
SPDT FET	DC - 18	2	39	21	-7 / 0	Die	TGS8250-SCC
SP3T VPIN	1 - 20	0.5	35	23	10 mA	Die	TGS2303
SP4T VPIN	1 - 20	0.6	38	23	10 mA	Die	TGS2304-SCC
SP3T VPIN	4 - 18	1	35	20	+/- 2.7	Die	TGS2313
SPDT VPIN	4 - 20	0.9	35	>20	+/- 2.7	Die	TGS2302
SPDT VPIN	24 - 43	<2	36	27	+/- 5	Die	TGS4301
SPDT VPIN	27 - 46	0.9	30	>34	+/- 5 / 15	Die	TGS4302
SPDT VPIN Absorptive	32 - 40	1	36	>33	+/- 5 / 18	Die	TGS4304
SP3T	60 - 90	2.3	20	>-13	-5 / 1.35	Die	TGS4305-FC
SP4T	70 - 90	3	20	>-8	-5 / 1.35	Die	TGS4306-FC

NOTES: * = New

Protectors

Description	Application	Leakage Current (nanoAmps)	Trigger Voltage (V)	Series Capacitance (pF)	Package Area (mm²)	Package Style	Part Number
CATV Protector	ESD & Secondary Protection	20 @ 1V, 500 @ 15V	18, 25, 41	0.29, 0.29, 0.22	1.8	T / SLP-3	TQP200002

SAW

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
Cable IF Filter	36.15	8	19.7	SE / SE	38 @ 10.23	DIP	855748
Cable IF Filter	44	6	20.4	SE / SE	38 @ 7.6	DIP	855079
CDMA IF Filter	69.99	1.26	17.1	SE / SE	25 @ 1.68	24.6x9	856199
BWA / WiMAX IF Filter	70	8	12.95	SE / SE	35 @ 3.2	13.3x6.5	855677
Low Loss IF Filter	70	0.5	7.6	SE / SE	35 @ 1.28	19x6.5	854651
Low Loss IF Filter	70	1	7.3	SE / SE	40 @ 2.8	19x6.5	854652
Low Loss IF Filter	70	1.5	7.5	SE / SE	40 @ 3.2	19x6.5	854653
Low Loss IF Filter	70	2	7.85	SE / SE	40 @ 4.25	19x6.5	854654
Low Loss IF Filter	70	2.5	8.75	SE / SE	40 @ 4.6	19x6.5	854655
Low Loss IF Filter	70	3	6.95	SE / SE	35 @ 6.9	13.3x6.5	854656
Low Loss IF Filter	70	3.5	7.25	SE / SE	35 @ 7.2	13.3x6.5	854657
Low Loss IF Filter	70	4	6.8	SE / SE	40 @ 8.25	13.3x6.5	854658
Low Loss IF Filter	70	4.5	6.8	SE / SE	35 @ 8.5	13.3x6.5	854659
Low Loss IF Filter	70	5	7.25	SE / SE	40 @ 9.35	13.3x6.5	854660
Low Loss IF Filter	70	6	7.5	SE / SE	40 @ 10.2	13.3x6.5	854661
Low Loss IF Filter	70	7	8.5	SE / SE	40 @ 11.55	13.3x6.5	854662
Low Loss IF Filter	70	8	9	SE / SE	40 @ 13.25	13.3x6.5	854663
Low Loss IF Filter	70	9	9.75	SE / SE	40 @ 13.9	13.3x6.5	854664
Low Loss IF Filter	70	10	10	SE / SE	40 @ 15	13.3x6.5	854665
Low Loss IF Filter	70	12	11.5	SE / SE	40 @ 17.35	13.3x6.5	854666

SAW (cont.)

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
Low Loss IF Filter	70	14	12.5	SE / SE	40 @ 19.5	13.3x6.5	854667
Low Loss IF Filter	70	16	12.5	SE / SE	40 @ 21.4	13.3x6.5	854668
Low Loss IF Filter	70	18	13.5	SE / SE	40 @ 23.4	13.3x6.5	854669
Low Loss IF Filter	70	20	14.5	SE / SE	40 @ 25.4	13.3x6.5	854670
Low Loss IF Filter	70	22	15	SE / SE	40 @ 27.25	13.3x6.5	854671
Low Loss IF Filter	70	24	16.25	SE / SE	40 @ 29.65	13.3x6.5	854672
Low Loss IF Filter	70	26	17	SE / SE	40 @ 32	13.3x6.5	854673
Low Loss IF Filter	70	28	17.6	SE / SE	40 @ 33.75	13.3x6.5	854674
Low Loss IF Filter	70	30	17.5	SE / SE	40 @ 37	13.3x6.5	854675
Low Loss IF Filter	70	36	20.2	SE / SE	40 @ 43.3	13.3x6.5	854678
Low Loss IF Filter	70	40	21.5	SE / SE	40 @ 47.25	13.3x6.5	854680
High Selectivity IF Filter	70	0.3	16.36	SE / SE	40 @ 0.9	24.6x9	855735
High Selectivity IF Filter	70	0.5	21.3	SE / SE	40 @ 1.63	24.6x9	855736
High Selectivity IF Filter	70	1	22.2	SE / SE	40 @ 2.11	24.6x9	855737
High Selectivity IF Filter	70	1.5	21.6	SE / SE	40 @ 2.52	24.6x9	855738
High Selectivity IF Filter	70	2	23	SE / SE	40 @ 3.4	24.6x9	855739
High Selectivity IF Filter	70	2.5	20.25	SE / SE	40 @ 4.3	24.6x9	855740
High Selectivity IF Filter	70	3	23	SE / SE	40 @ 4.46	24.6x9	855741
High Selectivity IF Filter	70	3.5	19	SE / SE	40 @ 6	15.3x6.5	855742
High Selectivity IF Filter	70	4	23	SE / SE	40 @ 6	19x6.5	855743
High Selectivity IF Filter	70	4.5	23.7	SE / SE	40 @ 6.64	19x6.5	855744
High Selectivity IF Filter	70	5.5	22.2	SE / SE	40 @ 7.84	19x6.5	855745
CDMA IF Filter	73.59	1.2	11.9	SE / SE	45 @ 79.58	19x6.5	856111
Medical IF Filter	73	0.3	6	SE / SE	45 @ 69.9	24.6x9	856152*
BWA / WiMAX IF Filter	80	8	11.7	SE / SE	35 @ 14.25	13.3x6.5	855679
GSM IF Filter	86.6	0.4	5.3	SE / BAL	28 @ 1.58	19x6.5	854823
GSM IF Filter	87	0.4	4.4	BAL / BAL	28 @ 1.59	19x6.5	855500
CDMA IF Filter	118.58	3.69	17.4	SE / SE	43 @ 123.48	13.3x6.5	855958
GSM IF Filter	125	0.4	5.9	SE / SE	20 @ 2.4	9.1x4.8	856444
Low Loss Filter	140	1.7	11	SE / SE	40 @ 3.5	19x6.5	855579*
Low Loss IF Filter	140	4	10.85	SE / SE	40 @ 9.1	13.3x6.5	854909
Low Loss IF Filter	140	7	5.5	SE / SE	40 @ 11.1	13.3x6.5	854913
Low Loss IF Filter	140	10	8.3	SE / SE	35 @ 15	13.3x6.5	854916
Low Loss IF Filter	140	10	11	SE / SE	35 @ 15	13.3x6.5	856656
Low Loss IF Filter	140	12	8.87	SE / SE	35 @ 21.3	13.3x6.5	854917
Low Loss IF Filter	140	15	11	SE / SE	35 @ 22	13.3x6.5	856684
Low Loss IF Filter	140	16	8.4	SE / SE	35 @ 22	13.3x6.5	854919
Low Loss IF Filter	140	18	9.1	SE / SE	40 @ 48	13.3x6.5	854920
Low Loss IF Filter	140	18.4	9.1	SE / SE	36 @ 26.4	7x5.5	856929*
Low Loss IF Filter	140	20	11	SE / SE	35 @ 24	13.3x6.5	856592
Low Loss IF Filter	140	24	11.3	SE / SE	35 @ 33.5	13.3x6.5	854923
Low Loss IF Filter	140	32	11.5	SE / SE	35 @ 44	13.3x6.5	854927
High Selectivity IF Filter	140	0.8	20.8	SE / SE	40 @ 1.93	19x6.5	856062
High Selectivity IF Filter	140	1.5	21.9	SE / SE	40 @ 3.5	19x6.5	856063
High Selectivity IF Filter	140	2	21.5	SE / SE	40 @ 3.45	19x6.5	856064
High Selectivity IF Filter	140	3	22.4	SE / SE	40 @ 4.86	19x6.5	856065
High Selectivity IF Filter	140	6	23	SE / SE	40 @ 8.34	13.3x6.5	856066
High Selectivity IF Filter	140	7	24.5	SE / SE	40 @ 9.15	13.3x6.5	856067
High Selectivity IF Filter	140	8	23.4	SE / SE	40 @ 11.28	13.3x6.5	856068
High Selectivity IF Filter	140	10	20.87	SE / SE	40 @ 13.17	13.3x6.5	856069
High Selectivity IF Filter	140	14	23.3	SE / SE	40 @ 18.26	13.3x6.5	856070
High Selectivity IF Filter	140	16	21.7	SE / SE	40 @ 20.69	13.3x6.5	856071

NOTES: * = New

SAW (cont.)

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
High Selectivity IF Filter	140	28	20	SE / SE	40 @ 37	9x7	856019
High Selectivity IF Filter	140	28.56	27.7	SE / SE	40 @ 44	13.3x6.5	856817
High Selectivity IF Filter	140	32	21.7	SE / SE	40 @ 40.7	9x7	856072
High Selectivity IF Filter	140	44	21.75	SE / SE	40 @ 54.1	9x7	856073
High Selectivity IF Filter	140	56	18.65	SE / SE	40 @ 75.6	9x7	856074
High Selectivity Filter	140	60	22.4	BAL / BAL	40 @ 74.7	9.1x4.8	856774*
High Selectivity IF Filter	140	64	17.8	SE / SE	40 @ 84	9x7	856020
High Selectivity IF Filter	140	72	21	SE / SE	40 @ 102	9x7	856314
High Selectivity IF Filter	140	1.5	12.1	SE and BAL	48 @ 143	9.1x4.8	856691
High Selectivity IF Filter	140	3	13.6	SE and BAL	46 @ 144	9.1x4.8	856692
High Selectivity IF Filter	140	6	11	BAL / BAL	39 @ 147	9.1x4.8	856693
High Selectivity IF Filter	140	7	13.6	SE and BAL	43 @ 147	9.1x4.8	856694
High Selectivity IF Filter	140	10	10	BAL / BAL	41 @ 152.5	9.1x4.8	856695
High Selectivity IF Filter	140	14	8.5	SE and BAL	43 @ 155	9.1x4.8	856696
High Selectivity IF Filter	140	20	9.8	BAL / BAL	40 @ 158.5	9.1x4.8	856697
High Selectivity IF Filter	140	28	18	SE and BAL	42 @ 168	9.1x4.8	856698
CDMA IF Filter	141	1.18	11.7	SE / SE	42.5 @ 2.5	19x6.5	855395
High Selectivity IF Filter	144	75	21.2	SE / SE	40 @ 91.81	9x7	856727
CDMA IF Filter	150	1.18	18.6	SE / BAL	30 @ 4.5	19x6.5	854833-1
CDMA IF Filter	150	8	12.1	SE / SE	35 @ 14.25	13.3x6.5	855678
CDMA IF Filter	153.6	3.75	12.04	SE / SE	45 @ 9.8	13.3x6.5	856048
TDSCDMA / WCDMA IF Filter	153.6	15	10	SE / SE	40 @ 25	13.3x6.5	856748
CDMA IF Filter	160	1.18	19.5	SE / BAL	30 @ 4.5	19x6.5	855049
Repeater IF Filter	161.5	25	22	SE / SE	50 @ 131	9x7	855886*
WCDMA IF Filter	167	5	8	SE / SE	20 @ 11.8	9.1x4.8	856683
CDMA IF Filter	167.1	1.18	10.9	SE / SE	15 @ 2	19x6.5	855394
CDMA IF Filter	167.1	11	13.1	SE / SE	40 @ 16	13.3x6.5	855753
WCDMA IF Filter	168.5	20	8	SE / BAL	33 @ 190	5x5	856512
WCDMA IF Filter	168.96	3.84	11.5	SE / SE	30 @ 16	9.1x4.8	856320
GSM IF Filter	170.6	0.18	5	BAL / BAL	40 @ 1.6	9.1x4.8	856706
WCDMA IF Filter	172.8	8.84	12.5	SE / BAL	32 @ 16	7x5.5	856620
WCDMA IF Filter	172.8	20	8	SE / BAL	30 @ 194.3	5x5	856802
WCDMA IF Filter	172.8	21	8.2	BAL / BAL	50 @ 200	7x5.5	856893
WCDMA IF Filter	190	5.5	9.8	SE / BAL	30 @ 7.6	13.3x6.5	855529
WCDMA IF Filter	190	5	8	SE / SE	25 @ 9	5x5	855770
GSM IF Filter	190	0.2	4.2	BAL / BAL	30 @ 12	7x5.5	855625
GSM IF Filter	199	0.2	5.4	SE / SE	20 @ 1.2	9x7	856730
GSM IF Filter	199	0.2	6	SE / SE	45 @ 1.6	19x6.5	855131
GSM IF Filter	201	0.22	6.1	BAL / BAL	27 @ 0.8	13.3x6.5	856541
Cable IF Filter	202.75	1.2	6.6	SE / SE	40 @ 10	13.3x6.5	855068
GSM IF Filter	208	0.4	5.9	SE / SE	20 @ 2.4	9.1x4.8	856445
WCDMA IF Filter	208	3.84	11.5	BAL / BAL	17 @ 5.03	9.1x4.8	856496
GSM IF Filter	211	0.2	5.2	SE / SE	25 @ 0.8	13.3x6.5	856378
WCDMA IF Filter	219	20	9.6	BAL / BAL	35 @ 36	9x7	856795
WCDMA IF Filter	230	4	16.2	SE / SE	40 @ 10	13.3x6.5	855832
CDMA IF Filter	240	3.6	14.3	SE / SE	12 @ 5	13.3x6.5	855992
CDMA IF Filter	240	1.1	13	SE / SE	10 @ 1.8	19x6.5	856151
CDMA IF Filter	249.6	3.84	16.11	SE / SE	40 @ 11	7x5.5	855915
CDMA IF Filter	326.4	15	12.61	SE / SE	40 @ 25	7x5.5	855914
BWA / WiMAX IF Filter	330	5.45	18.26	SE / SE	50 @ 13.6	15.3x6.5	855730
WCDMA / LTE IF Filter	344	65	9.5	BAL / BAL	45 @ 66.6	5x5	857004*
BWA / WiMAX IF Filter	350	1.7	13.7	SE / BAL	45 @ 6	13.3x6.5	855399
BWA / WiMAX IF Filter	350	1	8.2	SE / BAL	45 @ 15	7x5.5	855377

NOTES: * = New

SAW (cont.)

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
WCDMA IF Filter	358.4	19.2	10.1	BAL / BAL	25 @ 375.4	7x5.5	856771
WCDMA IF Filter	358.4	24.8	9	BAL / BAL	30 @ 335.8	7x5.5	856966*
WLAN IF Filter	374	17	8.5	SE / BAL	10 @ 33	7x5.5	855653
WLAN IF Filter	374	17	8.5	SE / BAL	35 @ 33	5x5	855898
WLAN IF Filter	374	17	9	SE / BAL	30 @ 33	3.8x3.8	856278
BWA / WiMAX IF Filter	374	10	9	BAL / BAL	10 @ 25	3.8x3.8	856466
WCDMA IF Filter	380	5.4	15.4	SE / BAL	30 @ 8.3	13.3x6.5	855530
BWA / WiMAX IF Filter	380	7	10	BAL / BAL	40 @ 20	7x5.5	856490
BWA / WiMAX IF Filter	380	10	8.7	BAL / BAL	40 @ 36	7x5.5	856631
WCDMA IF Filter	398	4.3	9.9	SE / SE	50 @ 36	9.1x4.8	855561
WCDMA / WiMAX IF Filter	398	15	7.5	SE / SE	30 @ 60	9.1x4.8	855559
BWA / WiMAX IF Filter	398	10	11.2	BAL / BAL	35 @ 388.5	5x5	856652
BWA / WiMAX IF Filter	426	5.16	18.02	SE / SE	50 @ 14	13.3x6.5	855731
WiBRO IF Filter	456	8.75	7.9	BAL / BAL	36 @ 443.25	5x5	856549
BWA / WiMAX IF Filter	456	10	8.3	BAL / BAL	37 @ 440	7x5.5	856672
BWA / WiMAX IF Filter	456	10	8.3	BAL / BAL	37 @ 440	5x5	856638
WCDMA IF Filter	456	19	10	BAL / BAL	25 @ 439	7x5.5	856687
General Purpose IF Filter	460	3.75	11.1	SE / SE	35 @ 8	7x5.5	856282
BWA / WiMAX IF Filter	464	3.5	10.6	BAL / BAL	53 @ 417	7x5.5	856623
FRS RF or GPS IF Filter	465	6	1.43	SE / SE	40 @ 445	3x3	856288
WiMAX IF Filter	467	10	3	SE / SE	40 @ 438	3.8x3.8	856586*
BWA / WiMAX IF Filter	479.75	9	19.5	SE / SE	35 @ 22	7x5.5	855271
BWA / WiMAX IF Filter	479.75	23	9.8	BAL / BAL	35 @ 36	7x5.5	855272
Cable IF Filter	499.25	1	7	SE / SE	35 @ 6	9x7	855104
BWA / WiMAX IF Filter	520	6	10.8	SE / SE	30 @ 514	5x5	856680*
BWA / WiMAX IF Filter	520	11	9.5	SE / SE	35 @ 506	5x5	856625*
WLAN IF Filter	549.5	1	11.6	SE / SE	40 @ 547.4	9x7	855985*
WLAN IF Filter	549.5	10	11.8	SE / SE	40 @ 536.5	7x5.5	855959*
BWA / WiMAX IF Filter	580	10	10.7	BAL / BAL	40 @ 36	5x5	856665
RF Filter – Band 12 Uplink	707	18	1.5	SE / SE	9 @ 728	3x3	856884
Duplexer, Band 17	710 / 740	12 / 12	1.2 / 1.8	SE / BAL	–	2.5x2	856931
RF Filter – Band 12 Downlink	737	18	1.8	SE / SE	37 @ 708	3x3	856883
RF Filter – Band 13 Downlink	751.5	11	1.5	SE / SE	40 @ 776	3x3	856794*
Duplexer, Band 13	751 / 782	9 / 9	2.3 / 1.8	SE / BAL	–	2.5x2	856879
WiMAX IF Filter	756	10	1.9	SE / SE	30 @ 727	3.8x3.8	856690*
BWA IF Filter	756	20	0.9	SE / SE	30 @ 716	3.8x3.8	856866*
RF Filter – Band 13 Uplink	781.5	11	1.5	SE / SE	38 @ 757	3x3	856764
RF Filter – Band 13 Uplink	782	10	1.52	SE / SE	15 @ 765	3x3	856844
BWA / WiMAX IF Filter	810	10	3.5	SE / SE	10 @ 31	3x3	856526
Duplexer, Band 20	806 / 847	30 / 30	2.5 / 3	SE / BAL	–	2.5x2	856979*
Duplexer, BC10	833 / 878	32 / 32	2.5 / 2.5	SE / BAL	–	2.5x2	856999*
RF Filter – Band 5 Uplink	836.5	25	2.7	SE / SE	28 @ 869	3x3	856503*
RF Filter – Band 5 Uplink	836.5	25	2.7	SE / SE	28 @ 869	3x3	855729
RF Filter – Band 5 Uplink	836.5	25	2	SE / SE	10 @ 869	3x3	856704
RF Filter – Band 5 Uplink	836.5	25	1.9	SE / SE	35 @ 869	3x3	855821
Duplexer, Cell Band	836.5 / 881.5	25 / 25	1.9 / 1.9	SE / SE	–	3.8x3.8	856356
RF Filter – Band 20 Uplink	847	30	1.3	SE / SE	10 @ 882	3x3	856932*
EU ISM 875 Band RF Filter	875	13	2.4	SE / SE	55 @ 849	2x1.5	856963*
RF Filter – Band 5 Downlink	881.5	25	2.7	SE / SE	40 @ 849	3x3	855728
RF Filter – Band 5 Downlink	881.5	25	1.8	SE / SE	35 @ 849	3x3	855782
CDMA 2-in-1 Rx Filter	881.5 / 1960	25 / 60	1.6 / 2.2	SE / BAL	–	2x1.5	856565
RF Filter – Band 5 Downlink	881.5	25	2.7	SE / SE	40 @ 849	3x3	856504*

NOTES: * = New

SAW (cont.)

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
Cell Band Delay Filter 450 NS	881.5	25	2.5	SE / BAL	–	7x5.5	856716
RF Filter – Band 8 Uplink	897.5	35	1.4	SE / SE	10 @ 984	3x3	856824
RF Filter – Band 8 Uplink	897.5	35	1.5	SE / SE	15 @ 930	3x3	856657
RF Filter – Band 8 Uplink	897.5	35	1.9	SE / SE	14 @ 930	3x3	856671
ISM 915 Band RF Filter	915	26	2.3	SE / SE	35 @ 882.5	2x1.5	856327
ISM 915 Band RF Filter	915	4.4	2.4	SE / SE	55 @ 849	3x3	856686
ISM 921.5 Band RF Filter	921.5	13	2.4	SE / SE	55 @ 825	2x1.5	856905*
RF Filter – Band 8 Downlink	942.5	35	2	SE / SE	5 @ 915	3x3	855820
RF Filter – Band 8 Downlink	942.5	35	3.2	SE / SE	12 @ 915	3x3	855810
RF Filter – Band 8 Downlink	942.5	35	2.5	SE / SE	25 @ 915	3x3	856528
GSM Band Delay Filter, 450 ns	942.5	35	25.5	SE / SE	–	7x5.5	856766
WLAN IF Filter	970	9	24	SE / SE	35 @ 945	9.1x4.8	856338*
WLAN IF Filter	970	18	24.7	SE / SE	35 @ 945	7x5.5	856339*
Tuner IF Filter	1086	10	4	BAL / BAL	40 @ 1046	3x3	855964
Tuner IF Filter	1086	10	4	BAL / BAL	40 @ 1046	3x3	856330
Tuner IF Filter	1090	10	5	BAL / BAL	50 @ 1050	3.8x3.8	856096
WLAN IF Filter	1150	16	4.4	BAL / BAL	20 @ 1170	3x3	856256
GPS L5 RF Filter	1176	20	2.4	SE / SE	20 @ 1226	2x1.5	856440
Tuner IF Filter	1216	8	3.75	BAL / BAL	12 @ 24	3x3	856365
Tuner IF Filter	1220	10	4.5	BAL / BAL	30 @ 60	3x3	856298
Tuner IF Filter	1220	50	3.9	BAL / BAL	33 @ 96	3.8x3.8	856598
GPS L2 RF Filter	1227.6	20	1.1	SE / SE	27 @ 1152	2x1.5	856700
Tuner IF Filter	1250	96	6	BAL / BAL	44 @ 1152	3x3	856653
RF Filter – Band 11 Uplink	1445.4	35	1.25	SE / SE	20 @ 1495.9	3x3	856928*
GPS RF Filter	1575.42	2	1.3	SE / SE	30 @ 1625	3x3	855969
GPS RF Filter	1575.42	2	1.25	SE / SE	30 @ 1624	2x1.5	856584
GPS RF Filter	1575.42	2	0.75	SE / SE	35 @ 1635	1.4x1.2	856561
GPS RF Filter	1575.42	2	1.1	SE / BAL	20 @ 1635	1.4x1.2	856576
GPS RF Filter	1575.42	2	1	SE / SE	27 @ 800	1.5x1.5	856463
GPS RF Filter	1575.42	2	0.5	SE / SE	20 @ Cell Bands	1.4x1.2	856756
GPS RF Filter	1575.42	2	0.7	SE / SE	27 @ 1700	1.5x1.5	856398
GPS RF Filter	1575.42	2	0.6	SE / SE	21 @ Cell Bands	1.4x1.2	856793
GPS RF Filter, Auto	1575.42	2	1.8	SE / SE	45 @ 1637	3x3	856039
GPS RF Filter, Auto	1575.42	2	1.3	SE / SE	45 @ 1640	3x3	856139
GPS / SDARS Diplexer	1575.42 / 2332.5	3 / 25	0.6 / 0.8	SE / SE	GPS Port: 40 @ 2332 SDARS Port: 36 @ 1572	3x3	TQM2M9016*
RF Filter – Band 3 Uplink	1747.5	75	2	SE / SE	22 @ 1676	3x3	856654
RF Filter – Band 3 Downlink	1842.5	75	1.9	SE / SE	10 @ 1785	3x3	855860
RF Filter – Band 2 Uplink	1880	60	2.2	SE / SE	15 @ 1806	3x3	856705
RF Filter – Band 2 Uplink	1880	60	2.3	SE / SE	10 @ 1790	3x3	856880
RF Filter – Band 2 Uplink	1880	60	2.4	SE / SE	7 @ 1930	3x3	855849
RF Filter – Band 2 Uplink	1880	60	2.8	SE / SE	30 @ 1930	3x3	856530
Tuner IF Filter	1892	8	4.2	BAL / BAL	23 @ 1932	2.5x2	856236
RF Filter – Band 1 Uplink	1950	60	1.8	SE / SE	20 @ 2100	3x3	856678
RF Filter – Band 1 Uplink	1950	60	2.2	SE / SE	40 @ 2110	3x3	856532
RF Filter – Band 2 Downlink	1960	60	2.1	SE / SE	10.3 @ 1910	3x3	855817
RF Filter – Band 2 Downlink	1960	60	2.9	SE / SE	15 @ 1910	3x3	855859
RF Filter – Band 2 Downlink	1960	60	2.25	SE / SE	14 @ 1910	3x3	856531
Delay Filter, PCS 450 ns	1960	60	25	SE / BAL	–	7x5.5	856717
Delay Filter, UMTS 450 ns	2140	60	25	SE / BAL	–	7x5.5	856649
RF Filter – Band 1 Downlink	2140	60	2.3	SE / SE	25 @ 1980	3x3	856738
SDARS Filter	2332.5	45	1.7	SE / BAL	35 @ 2100	1.4x1.2	856604

NOTES: * = New

SAW (cont.)

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
Bluetooth® RF Filter	2441	83.5	2.8	SE / SE	26 @ 2200	3x3	855916
Bluetooth® RF Filter	2441	83.5	2	SE / SE	28 @ 2300	1.4x1.2	856539

NOTES: * = New

BAW

Description	Frequency (MHz)	Bandwidth (MHz)	Typical IL (dB)	I / O Configuration	Rejection {dB @ BW or Freq (MHz)}	Package Size (mm)	Part Number
RF Filter	710	20	2	SE / SE	50 @ 140	3.81x2.54	880370
RF Filter, ISM	915	15	3.5	SE / SE	40 @ 35	6.35x4.57	880371
RF Filter	1030	15	2.5	SE / SE	40 @ 45	3.81x2.54	880367
RF Filter	1090	15	2.5	SE / SE	40 @ 45	3.81x2.54	880374
GPS RF Filter, L5	1176	28	2.75	SE / SE	40 @ 140	3.26x1.6	880364
GPS RF Filter, L2	1227	30	2.75	SE / SE	40 @ 140	3.26x1.6	880272
GPS RF Filter, L2	1227	15	1.5	SE / SE	40 @ 250	3.26x1.6	880366
GPS RF Filter, L2	1227	15	3	SE / SE	40 @ 45	3.81x2.54	880372
RF Filter	1280	20	3	SE / SE	40 @ 105	3.81x2.54	880368
GPS RF Filter, L3 / L4	1380	30	3	SE / SE	40 @ 160	3.26x1.6	880365
GPS RF Filter, L1	1575	30	3	SE / SE	40 @ 160	3.26x1.6	880273
GPS RF Filter, L1	1575	18	1.5	SE / SE	40 @ 350	3.26x1.6	880085
GPS RF Filter, L1	1575	25	3	SE / SE	40 @ 60	3.81x2.54	880373
RF Filter	2324	38	3	SE / SE	40 @ 150	3.81x2.54	880148
SDARS	2332.5	45	1.7	SE / BAL	35 @ 2100	1.4x1.2	856604
ISM Passband Filter for Coexistence	2436	72	2	SE / SE	20 @ 2495	1.7x1.3	885007
ISM Notch RF Filter for Coexistence	2440	72	1.5 (Out of Band IL)	SE / SE	25 @ 2440 (Notch Rej)	1.7x1.3	885008
ISM Notch RF Filter for Coexistence	2440	85	2 (Out of Band IL)	SE / SE	18 @ 2440 (Notch Rej)	1.7x1.3	885010
RF Filter, MMDS	2560	30	3	SE / SE	40 @ 150	3.81x2.54	880157
RF Filter, ISM	5775	100	4.5	SE / SE	20 @ 350	3.26x1.6	880369

Automotive

Description	Frequency Bands	Features	Package Size (mm)	Part Number
QB GSM / GPRS Tx Module; PA / LPF / SP6T Switch	GSM850 / 900, DCS / PCS	High System Efficiency & Small Size	6x6x1.1	TQM6M4003
QB GSM / GPRS / EDGE-Polar PA Module	GSM850 / 900, DCS / PCS	-90 dBm Typ Rx Noise, +3 to +8 dBm Pin Nominal	5x5x1	TQM7M5012

GPS

Description	Frequency Bands	Features	Package Size (mm)	Part Number
GPS Filter-LNA-Filter Module	1575 MHz, GPS L1	Low Noise (1.56 dB) and High Gain (16 dB)	3x3x1	TQM640002

GSM / GPRS / EDGE

Description	Frequency Bands	Features	Package Size (mm)	Part Number
QB GSM / GPRS PA Module	GSM850 / 900, DCS / PCS	Low Band Ibatt < 1.5A @ Pcal w/PAE 55%	5x5x1	TQM7M4007

GSM / GPRS / EDGE (cont.)				
Description	Frequency Bands	Features	Package Size (mm)	Part Number
QB GSM / GPRS / EDGE-Linear HADRON II PA Module™	GSM850 / 900, DCS / PCS	Low Band Ibat < 1.5A @ Pcal w/PAE 55%	5x5x1	TQM7M5005H
QB GSM / GPRS Tx Module; PA / LPF / SP6T	GSM900 / DCS or GSM850 / PCS	High Efficiency Broadband Tx, 4 Rx Ports	6x6x1	TQM6M4003
DB GSM / GPRS QUANTUM Tx Module™; PA / LPF / SP4T, Quad-Band Tx & Dual-Band Rx	GSM900 / DCS or GSM850 / PCS	High Efficiency Broadband Tx, 2 Rx Ports	6x6x1	TQM6M4050*
DB GSM / GPRS QUANTUM Tx Module™; PA / LPF / SP4T, Quad-Band Tx & Dual-Band Rx	GSM900 / DCS or GSM850 / PCS	High Efficiency Broadband Tx, 2 Rx Ports	5x6x1	TQM6M4068*
DB GSM / GPRS QUANTUM Tx Module™; PA / LPF / SP4T, Quad-Band Tx & Dual-Band Rx	GSM900 / DCS or GSM850 / PCS	High Efficiency Broadband Tx, 2 Rx Ports	6x6x1	TQM6M4048
QB GSM / GPRS QUANTUM Tx Module™; PA / LPF / SP6T	GSM850 / 900, DCS / PCS	High Efficiency Broadband Tx, 4 Rx Ports	6x6x1	TQM6M4049

NOTES: * = New

3G - CDMA / EV-DO, 4G - LTE				
Description	Bands	Features	Package Size (mm)	Part Number
CDMA TRITIUM II PA-Duplexer Module™; SE Input w/Coupler	Cellular	2-Bit (Hi / Med / Lo Power Modes)	7x4x1.1	TQM613029
CDMA TRITIUM II PA-Duplexer Module™; SE Input w/Coupler	PCS	2-Bit (Hi / Med / Lo Power Modes)	7x4x1.1	TQM663029A
CDMA TRITIUM II PA-Duplexer Module™; SE Input w/Coupler	AWS	2-Bit (Hi / Med / Lo Power Modes)	7x4x1.1	TQM653029
CDMA SP3T Switch	Cellular / PCS / AWS	Antenna Routing	3x3x0.9	TQP4M3018
CDMA SP3T Switch	Cellular / PCS / AWS	Antenna Routing	2x2x0.57	TQP4M3019
LTE TRITON PA Module™, w/Coupler	Band 13	LTE, 2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM700013
CDMA TRITON PA Module™, w/Coupler	PCS	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM766012
CDMA TRITON PA Module™, w/Coupler	AWS	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM756014
CDMA TRITON PA Module™, w/Coupler	Cellular	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM716015
CDMA TRITON PA Module™, w/Coupler	PCS	1-Bit (Hi / Lo Power Modes)	3x3x0.9	TQM766062
CDMA TRITON PA Module™, w/Coupler	Cellular	1-Bit (Hi / Lo Power Modes)	3x3x0.9	TQM716065

3G - WCDMA / WGPRES / WEDGE, 4G - LTE				
Description	Bands	Features	Package Size (mm)	Part Number
QB GSM / GPRS / EDGE-Polar HADRON II PA Module™	GSM850 / 900, DCS / PCS	-90 dBm Typ Rx Noise, +3 to +8 dBm Pin Nom	5x5x1	TQM7M5012H
QB GSM / GPRS / EDGE-Linear HADRON II PA Module™	GSM850 / 900, DCS / PCS	Input Power Controlled for GMSK & 8PSK	5x5x1	TQM7M5013
QB GSM / GPRS / EDGE-Polar HADRON II PA Module™	GSM850 / 900, DCS / PCS	+3 to +8 dBm Pin Nominal, Current Limiter	5x5x1	TQM7M5022
WCDMA / HSUPA TRITON PA Module™, w/Coupler	Band 1	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM776011
WCDMA / HSUPA TRITON PA Module™, w/Coupler	PCS / Band 2	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM766012
WCDMA / HSUPA TRITON PA Module™, w/Coupler	Band 4	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM756014
WCDMA / HSUPA TRITON PA Module™, w/Coupler	Band 5	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM716015
WCDMA / HSUPA TRITON PA Module™, w/Coupler	Band 8	2-Bit (Hi / Med / Lo Power Modes)	3x3x0.9	TQM726018
LTE PA Module, w/Coupler	Band 13	LTE 1-Bit (Hi / Lo Power Modes)	3x3x0.9	TQM700013*
WCDMA / HSUPA TRITIUM III PA-Duplexer Module™; SE Input w/Coupler, Detector	Band 1	1-Bit (Hi / Lo Power Modes)	7x4.0x1.1	TQM676021
WCDMA / HSUPA TRITIUM III PA-Duplexer Module™; SE Input w/Coupler, Detector	Band 2	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM666022
WCDMA / HSUPA TRITIUM III PA-Duplexer Module™; SE Input w/Coupler, Detector	Band 4	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM656024
WCDMA / HSUPA TRITIUM III PA-Duplexer Module™; SE Input w/Coupler, Detector	Bands 5 and 6	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM616025
WCDMA / HSUPA TRITIUM III PA-Duplexer Module™; SE Input w/Coupler, Detector	Bands 5 and 6	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM616020

NOTES: * = New

3G – WCDMA / WGPRES / WEDGE, 4G – LTE (cont.)

Description	Bands	Features	Package Size (mm)	Part Number
WCDMA / HSUPA TRITIUM III PA-Duplexer Module™; SE Input w/Coupler, Detector	Band 8	1-Bit (Hi / Lo Power Modes)	7x4x1.1	TQM626028L
DB GSM / GPRS Tx Module: PA / LPF / SP6T WGPRES Switch w/Dual-Band WCDMA Antenna Pass-Through	GSM900 / DCS or GSM850 / PCS & 2 WCDMA Bands	Integrated DB GSM / GPRS & 2 WCDMA Antenna Switch Ports	5x6x1	TQM6M9069*
QB GSM / GPRS / EDGE-Linear TRP QUANTUM II Tx Module™: PA / LPF / SP8T WEDGE Switch w/Quad-Band WCDMA Antenna Pass-Through	GSM850 / 900, DCS / PCS & WCDMA B1, B2, B5 / 6, B8	Integrated QB GSM / GPRS / EDGE PA & Antenna Switch Supporting WCDMA	7x7.5x1.1	TQM6M9014
Multi-Mode Quad-Band GMSK / EDGE / WCDMA TRIUMF PA Module	GSM850 / 900, DCS / PCS & WCDMA B1 & B8	2-Bit (Hi / Med / Lo Power Modes)	5x7.5x1	TQM7M9023*
Multi-Mode Quad-Band GMSK / EDGE / WCDMA TRIUMF PA Module	GSM850 / 900, DCS / PCS & WCDMA B1 & B5	2-Bit (Hi / Med / Lo Power Modes)	5x7.5x1	TQM7M9032*
Multi-Band WCDMA / HSUPA / HSPA+ / TRIUMF PA Module	High Bands 1,2,3,4,9,10 & Low Bands 5,6,8	1-Bit (Hi / Lo Power Modes); 1-Bit Band Specific Pout Adjust	5x4x0.9	TQM7M9070*

NOTES: * = New

WLAN & Bluetooth® for Handsets

Description	Bands	Features	Package Size (mm)	Part Number
5 GHz WLAN PA MMIC	802.11 a	ETSLP-16 Package	3x3x0.45	TQP787011
2.4 GHz WLAN LNA + SP3T Switch MMIC w/WLAN Tx & Bluetooth® Paths	802.11 b, g	LNA Bypass, ETSLP-12 Package	1.5x1.5x0.55	TQP879001A
2.4 GHz WLAN PA + Switch MMIC w/WLAN Rx Balun & Bluetooth® Path	802.11 b, g, n	ETSLP-16 Package, Coupler / Detector	3x3x0.45	TQM679002A
2.4 GHz and 5 GHz WLAN PA + Switch MMIC w/WLAN Rx Baluns & Bluetooth® Path	802.11 a, b, g, n	ETSLP-24 Package, Coupler / Detector	4x4x0.45	TQP6M9002

WLAN & Bluetooth® for Wireless Data & Personal Media Devices

Description	Bands	Features	Package Size (mm)	Part Number
5 GHz WLAN PA MMIC	802.11 a	ETSLP-16 Package	3x3x0.45	TQP787011
2.4 GHz WLAN LNA + SP3T Switch MMIC w/WLAN Tx & Bluetooth® Paths	802.11 b, g	LNA Bypass, ETSLP-12 Package	1.5x1.5x0.55	TQP879001A
2.4 GHz WLAN PA + Switch MMIC w/WLAN Rx Balun & Bluetooth® Path	802.11 b, g, n	ETSLP-16 Package, Coupler / Detector	3x3x0.45	TQM679002A
2.4 GHz & 5 GHz WLAN PA + Switch MMIC w/WLAN Rx Baluns & Bluetooth® Path	802.11 a, b, g, n	ETSLP-24 Package, Coupler / Detector	4x4x0.45	TQP6M9002
Bluetooth® EDR v2.0 Class 1 PA MMIC	2.4 to 2.5 GHz ISM Band	STSLP-12 Package	2x2x0.57	TQP770001

UHF RFID

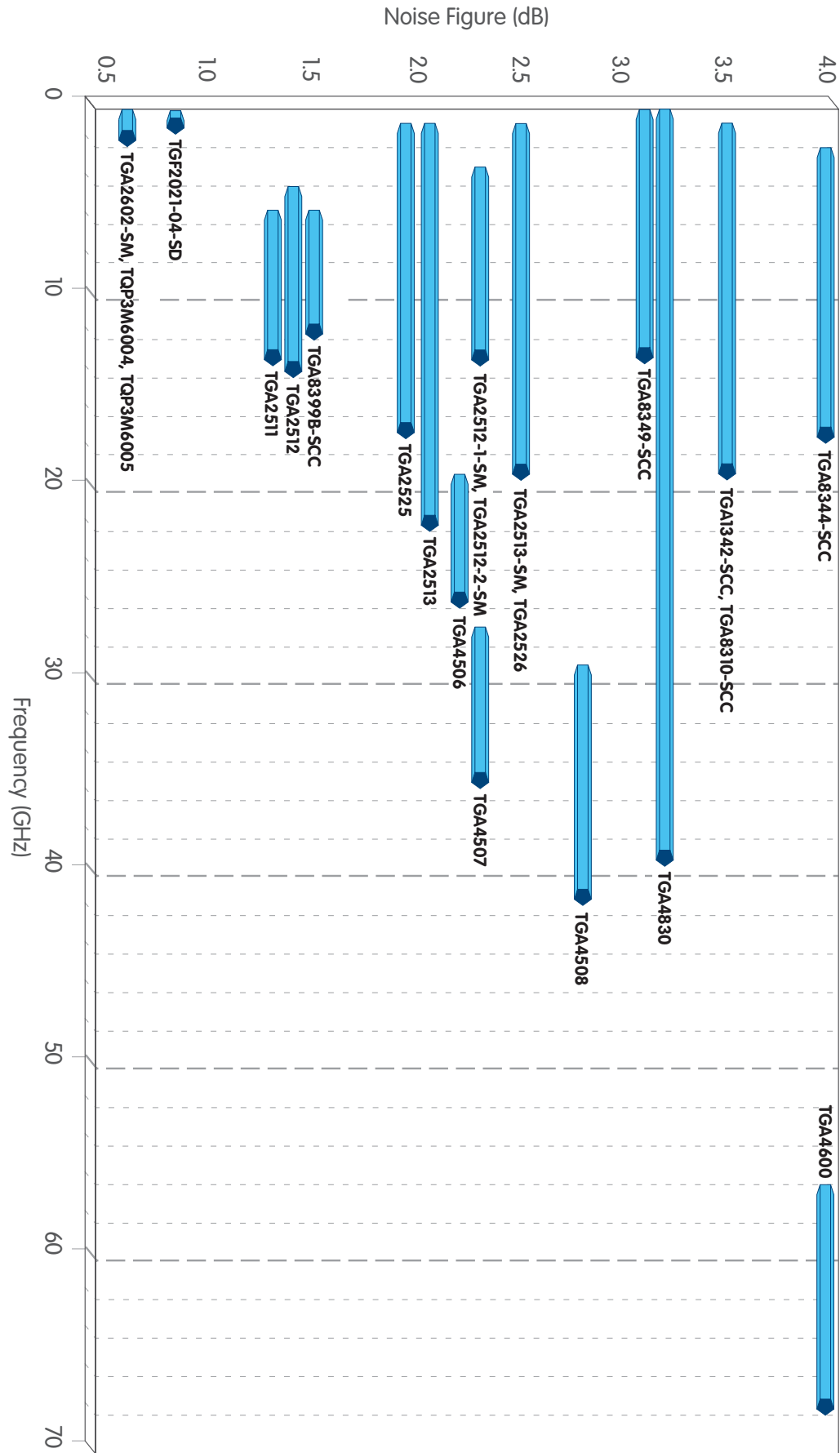
Description	Frequency (MHz)	Channels / Spacing (kHz)	Max Output Power (W)	Protocol Support	Region of Operation	Interface	Part Number
Reader PCMCIA Form Factor Module (ETSI 302.208)	865.7 - 867.5	4 / 600	1	ISO18000-6B & -6C	Europe	Serial TTL	WJR7081
Reader PCMCIA Form Factor Module (FCC Pt 15)	902.75 - 927.25	50 / 500	1	ISO18000-6C	N. America	Serial TTL	WJR7000
Embedded Reader Mod (FCC Pt 15)	902.75 - 927.25	50 / 500	1	ISO18000-6B & -6C	N. America	Serial TTL	WJM3000
Embedded Reader Mod (FCC Pt 15)	902.75 - 927.25	50 / 500	0.25	ISO18000-6B & -6C	N. America	Serial TTL	WJM1000
PCMCIA Form Factor Module	910.6 - 913.4	15 / 200	1	ISO18000-6B & -6C	Korea	Serial TTL	WJR7090
PCMCIA Reader Module (FCC Pt 15)	902.75 - 927.25	50 / 500	0.5	ISO18000-6B & -6C	N. America	PCMCIA	WJR6000

Amplifiers

Description	Frequency (GHz)	Power (Vpp or dBm)	Gain (dB)	NF (dB)	Voltage / Current (V / mA)	Package Style (mm)	Part Number
9.9 - 12.5Gb/s 3V - 7V Driver	DC - 13	3 - 7Vpp	32	–	3.3 - 5 / 115	8x8 QFN	TGA4956-SM
9.9 - 12.5 Gb/s Modulator Driver	DC - 16	3 - 10Vpp	35	2.5	5.5 - 8 / 210	11.4x8.9 SL	TGA4953-SL
9.9 - 12.5 Gb/s Modulator Driver	DC - 16	3 - 9Vpp	35	2.5	5.5 - 8 / 210	11.4x8.9 SL	TGA4954-SL
12.5 Gb/s NRZ Driver	DC - 18	3 - 11Vpp	16	–	8 / 285	Die	TGA4807
12.5 Gb/s NRZ Driver	DC - 18	6 - 8Vpp	16	3.5	5 - 8 / 70 - 175	Die	TGA1328-SCC
12.5 Gb/s NRZ Driver	DC - 18	4 - 8Vpp	16	3.5	8 / 175	8.9x8.9 SL	TGA8652-SL
15 Gb/s 10V Linear Modulator Driver	DC - 20	3 - 10Vpp	22	–	7 / 280	6x6 QFN	TGA4826-SM
40 & 100 Gb/s 8Vpp SE Driver	DC - 30	3 - 9Vpp	32	–	6 - 7 / 270	14.4x7 SL	TGA4943-SL
Wideband Driver (40 Gb/s)	DC - 35	4Vpp	12	–	5 / 135	Die	TGA4832
LNA / Gain Block (40 Gb/s)	DC - 40	11.5	13	3.2	5 / 50	Die	TGA4830
45 Gb/s 8Vpp SE Driver	DC - 35	5 - 9Vpp	30	–	6 - 7 / 300	14.4x7 SL	TGA4942-SL**
45 Gb/s 10Vpp Diff In / Out Driver	DC - 50	6 - 10Vpp Diff	27 Diff	–	5 - 6 / 500	Die	TGA4958-SL**
32 Gb/s 9Vpp Diff In / Out Driver	DC - 35	6 - 9Vpp Diff	25 Diff	–	5 - 6 / 500	SL	TGA4959-SL**
43 Gb/s Driver	DC - 78	3.5Vpp	8	5	6 / 82	Die	TGA4803
10.7 - 12.5 Gb/s Linear Modulator Driver	30 kHz - 8	12.5Vpp	20	–	8 / 310	8x8 QFN	TGA4823-2-SM

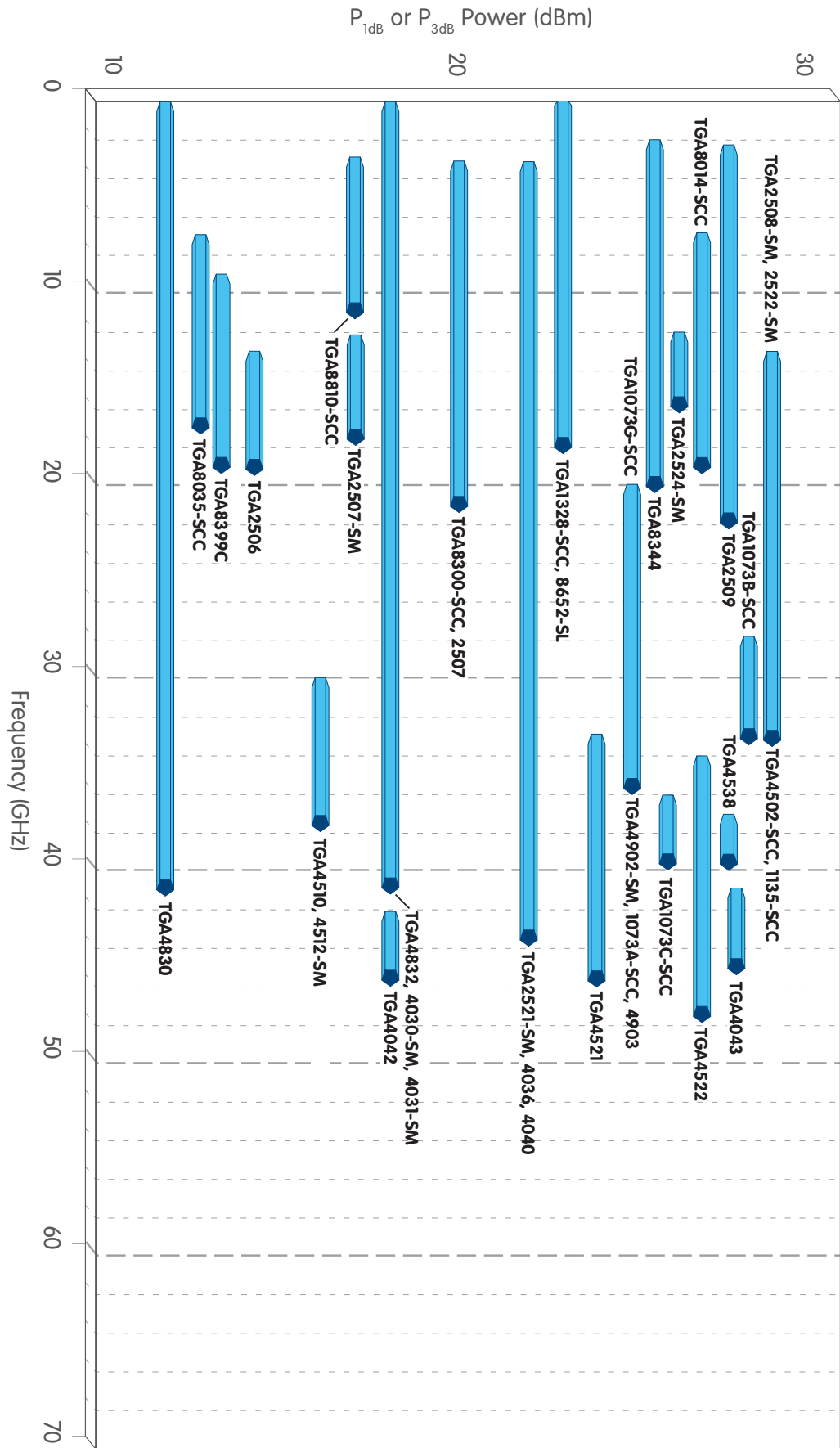
NOTES: ** = Coming Soon, SE = Single-Ended

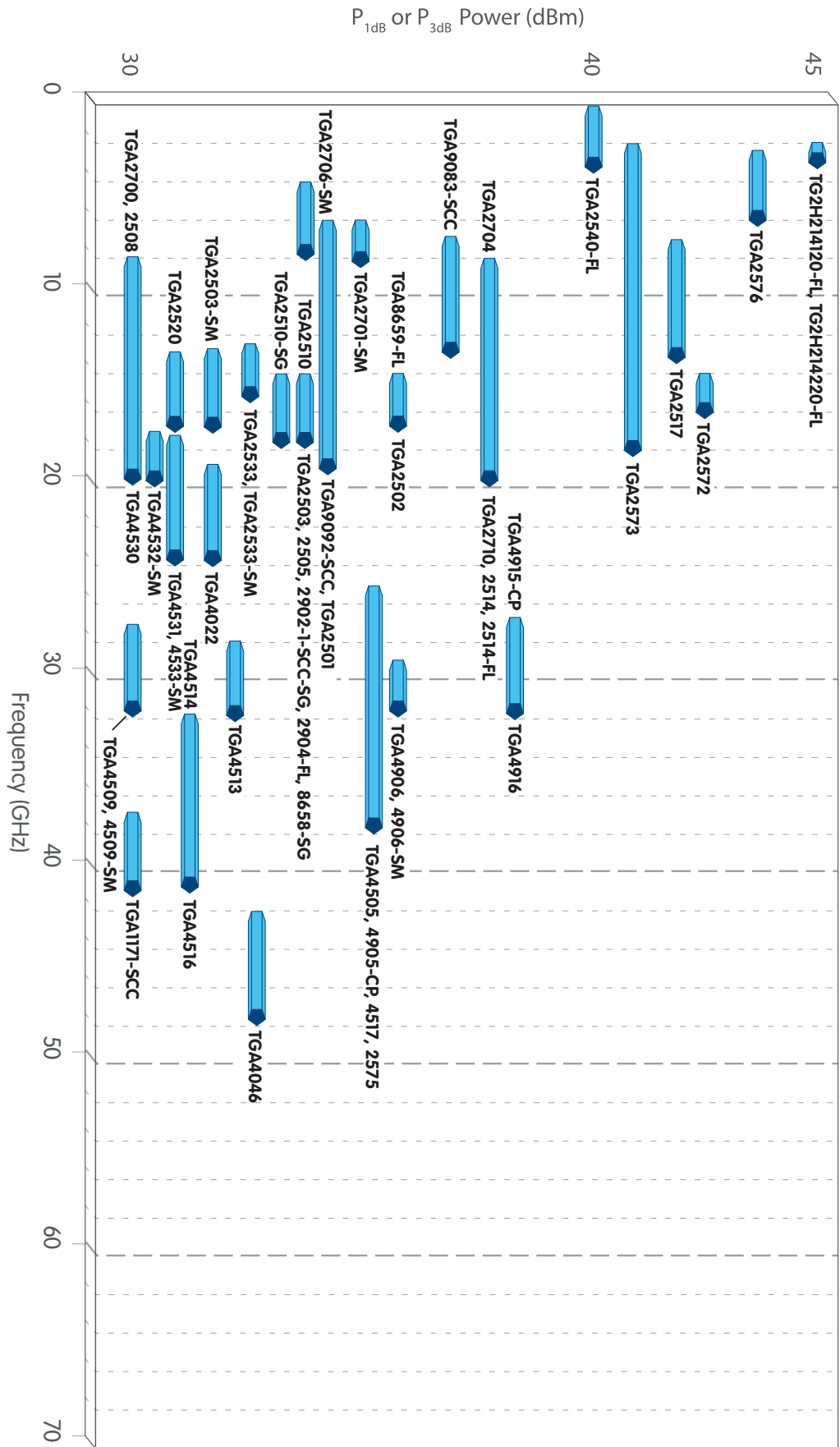




Selected Low Noise Amplifiers, LNA Noise Figure vs. Frequency

For a complete list of low noise amplifiers, please refer to page 28.





Selected More Than 1W Higher Frequency Amplifiers, Power vs. Frequency

For a complete list of more than 1W amplifiers, please refer to pages 25 and 26.

PACKAGING

For detailed information on TriQuint product packaging, please visit our website at www.triquint.com/prodserv.

ORDERING

TriQuint products can be purchased through:

- **TriQuint Field Sales Offices:**

We have regional sales offices across the globe to work closely with you on your next TriQuint product purchase. To identify the closest regional sales office, please go to our website at www.triquint.com/sales.

- **Local Sales Representatives:**

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- **Distributors - Buy / Resale Reps:**

TriQuint products can be purchased from any one of the distributors or buy / resale reps listed on our website at www.triquint.com/sales.

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For a complete listing of TriQuint terms and conditions of sale, please visit our website at www.triquint.com/sales.

EXPORT COMPLIANCE

Virtually all products TriQuint offers for sale as detailed in the Product Selection Guide are available for export in compliance with US government regulations. Please contact your TriQuint salesperson for details.

PRODUCT SUPPORT

- **Product Data Sheets and Literature:**

Detailed information on our products including datasheets and other literature can be found on the TriQuint website at www.triquint.com/prodserv.

- **Applications Support:**

Detailed product support information can be found on the TriQuint website at www.triquint.com/prodserv.

RELIABILITY PROGRAMS

Our programs are in line with JEDEC and other industry standards.

ENVIRONMENTAL POLICY

TriQuint Semiconductor is committed to managing environmental matters as an integral part of our business, complying with all applicable laws, regulations and other requirements, preventing pollution and continually improving.

ENVIRONMENTAL SYSTEMS

- ISO-14001:2004 (Select Sites)

QUALITY POLICY

The people of TriQuint Semiconductor are committed to continuous improvement, quality, reliability and customer satisfaction in everything we do.

QUALITY SYSTEMS

- ISO-9001:2008 Certified (Select Sites)
- ISO / TS 16949:2009 Certified (Select Sites)
- ISO / AS9100 Certified (Select Sites)

QUALITY TOOLS UTILIZED

- Design Failure Mode & Effects Analysis (DFMEA)
- Process Failure Mode & Effects Analysis (PFMEA)
- Process Control Plan (PCP)
- Production Part Approval Process (PPAP)
- Eight Discipline Problem Solving (8-D)
- Real Time Statistical Process Control (SPC)
- Measurement System Analysis (MSA)
- Advanced Product Quality Planning (APQP)

For further details on TriQuint quality information, please visit our website at www.triquint.com/company/quality.

PRODUCT COMPLIANCE POLICIES

TriQuint is committed to meeting all global product environmental regulations that affect its products. These regulations include:

- Directive 2002 / 95 / EC (RoHS Directive)
- Management Methods for Control of Pollution Caused by Electronic Information Products (China RoHS)
- Directive 94 / 62 / EC (Packaging Directive)
- Directive 2006 / 122 / EC (PFOS Directive)
- Regulation (EC) No 1907 / 2006 (REACH Regulation)
- Commission Decision 2009 / 251 / EC (Dimethylfumarate (DMF) Ban)

All active TriQuint commercial standard products are compliant with these directives. Contact TriQuint for the RoHS compliance status of custom products, military products and products manufactured prior to June 2006. All new product designs are halogen-free since late 2008. TriQuint does not use any REACH Substances of Very High Concern (SVHCs) in its products or packaging materials (as of May 2011). Also, TriQuint is committed to complying with Section 1502 (Conflict Minerals) of the Dodd-Frank Wall Street Regulation and Consumer Protection Act. We are actively surveying our supply chain to ensure that our products are "Conflict Free".

In addition to being compliant with the above product compliance laws and regulations, TriQuint participates in the following customer programs:

- Sony Green Partner
- Samsung Eco-Partner

Please contact TriQuint at rohs_info@tqs.com for any product compliance information requests. For further details on TriQuint environmental, health & safety information, please visit our website at www.triquint.com/company/ehs.

NOTICE

The data provided in this selection guide is subject to change without notice. TriQuint reserves the right to make changes to specifications and other information at any time.

Connecting the Digital World
to the Global Network®

TriQuint 
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