# Abstracts

## Low Noise Microwave Oscillator Using Ultra High Q Dielectric Resonator

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Dielectric resonator oscillator (DRO) with excellent low single side band (SSB) noise was developed at 16 GHz. BMT (Ba(Mg/sub 1/3/Ta/sub 2/3/)0/sub 3/) ceramics with low dielectric loss (tan delta = 3.3*10/sup -5/ at 10 GHz) was used as a dielectric resonator. A conventional GaAs MESFET was used as an active component, SSB noise at 10 kHz from the carrier of -102 dBc/Hz was obtained. This is one of the lowest SSB noise level that has ever reported for a Ku-band DRO. This result implies that the low loss BMT ceramics as a high Q dielectric resonator fairly contribute to the low noise performance of the oscillators.

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