mCOMET Tunable Co-Located Metal Ring Antenna



 Co-located LTE MIMO antenna with metal ring

Applications

Mobile devices operating on GSM, W-CDMA and LTE bands

Features

- Size 10 x 74 x 5mm3
- Ground cleared under antenna, GC area for one antenna 30 x 8 mm
- Operating bands 698 960, 1710 2170 and 2500 2690MHz
- All operating bands combined to single feed point for multi-band RF-engines
- Uses surrounding metal as part of the antenna
- Antenna requires SMT contact clips' mounting on device PWB
- µUSB connector placed between the antennas
- ROHS compliant product

Benefits

- Low profile
- Ultra small volume
- Space saving
 - Increased number of operating bands at the same end of the device
 - No need to reserve space for the antennas elsewhere in the chassis
 - mUSB or some other metallic component can be placed in between of primary and secondary antennas
- Wide-band coverage
- High performing

- Low band ECC below 0.5
- Design freedom and mechanical strength by using metal ring
- Minimized hand-effect (if other antenna is covered by a hand, the other one operates)
- Equal transmission line length from engine to antenna i.e. equal losses from the line
- Modularity, numerous integration possibilities (for example speaker)
- Industrialized concept
- Applicable to several antenna manufacturing technologies



Electrical specifications @ +25 °C

Note: Actual antenna free space performance depends on the device dimensions and materials surrounding the device and Ground Clearance area size.

Simulated typical performance

Simulated test device size: 124 x 74 x 7mm, PWB ground clearance area for one antenna 30 x 8mm

Operating band	Frequency Range [MHz]	Total efficiency in free space for primary antenna (in simulation setup) [dB]	Total efficiency in free space for secondary antenna (in simulation setup) [dB]	Return loss min [dB]	Impedance [Ω]	Max input PWR [dBm]	Operating Temperature [°C]
LTE-12	698746	-5.24.5	-6.25.4	-3	50	35	-30+95
LTE-13	746787	-4.54.1	-6.24.7	-4	50	35	-30+95
LTE-20	791862	-4.03.1	-5.44.8	-4	50	35	-30+95
GSM-850	824894	-3.63.1	-4.94.0	-5.5	50	35	-30+95
E-GSM-900	880960	-3.22.4	-4.13.7	-5.5	50	35	-30+95
DCS-1800	17101880	-4.43.0	-3.41.8	-4	50	35	-30+95
PCS-1900	18501990	-4.43.9	-3.52.9	-4	50	35	-30+95
WCDMA-I	19202170	-4.43.0	-3.52.9	-4	50	35	-30+95
LTE-7	25002690	-3.21.7	-5.12.9	-3	50	35	-30+95

For More Information

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