

MDS-MMDS Integrated Planar Transceiver



520042_2

Part number

520042_2

Downconverter specifications: (Rx)

RF Input Frequency	2500 - 2686 MHz
IF Output Frequency	222 - 408 MHz
Gain	28 ± 6 dB (-30°C to +60°C)
Gain Flatness (Downconverter Only)	3.5 dB typ., 4.5 dB Max. (-30°C to +60°C)
Integrated Gain Flatness (with Antenna)	5.5 dB Max. (-30°C to +60°C)
Noise Figure	4.5 dB Typ.; 6.0 dB Max at upper end of band
IMD*	-50 dBc Max.
Output 3rd Order Intercept	23 dBm Min.
Image Rejection (PCS Band inclusive)	80 dB Min. (60 dB is pre-LNA)
WCS Rejection	80 dB Min. (35 dB is pre-LNA)
Out-of-Band Rejection	15 dB at 2705 MHz Min. 40 dB at 2750 MHz Min. 40 dB at 2450 MHz Min.
IF Rejection	-85 dBc Max.
In-Band Spurious	-80 dBm Max.

Upconverter specifications: (Tx)

IF Input Frequency	14.375 - 26.375 MHz
RF Output Frequency	2150 - 2162 MHz
Gain Set (Gain flatness inclusive, full band)	21 to 26 dB @ 25°C
Gain Variation	±1.5 dB Max. (-30°C to +60°C)
Integrated Gain Flatness (with Antenna)	4.5 dB Max. (-30°C to +60°C)
Output 1-dB Compression Point	+25 dBm Min.
Output Transmit Noise	-120 dBm/Hz Max.
Output Spurious/Harmonics (+22 dBm Tx Out)	-60 dBc (Both in-band and out band)
Output Power Blanking Threshold	-52 ± 5 dBm @ IF Input

General specifications:

LO Frequency	2278 MHz ± 10 KHz (-30°C to +60°C)
Phase Noise	-65 dBc/Hz @ 100 Hz -85 dBc/Hz @ 1 KHz -93 dBc/Hz @ 10 KHz -98 dBc/Hz @ 100 KHz
IF Connector (Rx out / Tx In)	F-Type, 75 Ohm
Tx IF Return Loss	Tx In: -10 dB Typical, -8 dB Min.
DC Supply	16 to 24 Volts DC @ 550 mA
Physical Dimensions:	
Size	13.5 x 13.5 x 2.6 in.
Weight	6.0 lbs. (with mount)



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Antenna specifications:

Gain	17 dBi \pm 1 dB
3 dB Beamwidth	18.5° \pm 1.5°
1st Side Lobe (relative to main beam)	17 dB max., 20 dB Typ.
Cross Polarization	-30 dB max.
Pattern Interference Rejection (>60°)	20 dB min.

Environmental specifications:

Moisture	Environmentally sealed
Operating Temperature	-30°C to -60°C
Wind	Operational to 50 mph

**Two tone test @ -2 dBm each, 6MHz spacing at the output.*