

4.5 GHz Up/Down Converter Data Sheet



GENERAL DESCRIPTION

Microkim's line of various up /down converters are used for wireless communication applications such as: Point-to-Point, Point-to-Multi-point, WLL, MMDS, LMDS. These modules range from high-end modules for military and industrial applications to low-cost modules for general commercial applications.



GENERAL SPECIFICATIONS

RX

RX Operating Freq'	4.4 -5 GHz
Receiving Noise Figure	< 2.5 dB
Receiver Gain	Min 20 dB
Receiver Gain Variation	+/-0.5 dB Max within any 30 MHz BW. +/-2 dB Max within any BW
Receiver Gain Variation With Temperature	+/-3 dB Max
Receiver Group Delay Variation	+/-1ns Max within any 30 MHz BW (by simulation)
Receiver RF return loss	12 dB Min.
Receiver Spurious to RF	<-40 dBc , LO leakage -30 dBc
Receiver IF Spurious	
In band (780 - 820 MHz)	<-45 dBc
Out of band	-20 dBc
Receiver Image Rejection	-20 dBc
Receiver RF Input P1dB	-15 dBm
Receiver RF Input IP3	-7 dB
Receiver LO level (ext LO)	0 dBm+/-2.0 dB
Receiver LO Freq'	1850 - 2150 MHz (LO/2)
Receiver IF Freq'	780 - 820 MHz
Receiver IF Return Loss	12dB Min.

GENERAL

Connectors RF, LO, IF	SMA (F)
Dimensions	180 x 100 x 20 mm (x 2)
TX Input Voltage	10 V, -5 V
TX Current Consumption	2 A, 0.1A
RX Input Voltage	6 V, -5 V.
RX Current Consumption	0.5A, 0.1A.
Operating Conditions	ETS 300 019 class 4.1E
Operating Temperature	0 to 60 °C

GENERAL SPECIFICATIONS

TX

TX Operating Freq'	4.4 - 5 GHz
TX Output Power (P1dB)	Min +35 dBm
TX OIP3 @ -7dB, -15 dB	Min +45 dBm 2 ton 3 MHz,
TX NF	Max 15 dB
TX Power Monitoring Accuracy	35-25 dBm +/-1.0 dB (over freq' & temp') 25-20 dBm +/-1.5dB (0.5 to 4.5v output). 20-15 dBm +/-2.0 dB (and between units)
TX Power Monitoring Dynamic Range	Min 20 dB from P1 dB
TX Gain Variation	+/-1.5 dB
TX Power output Var. with temp.	+/-2 dB
Transmit on/off (by power Supply)	-60 dBc.
Transmitter Stability	Within any Return loss level & Phase.
Transmit Spurious	In band 4.4 - 5 GHz -55 dBc @ 30 KHz RBW
LO leakage	-15 dBm (Out of band -25 dBm)
Transmit Gain	35 dB Min.
Transmit Gain Variation	+/-0.5 dB Max within any 30 MHz BW
Transmit Group Delay Variation	+/-1ns Max within any 30 MHz BW (by simulation)
Transmit RF return loss	12 dB Min.
Transmit IF Freq'	825 - 860 MHz
Transmit IF return loss	Min 12 dB
TX LO Freq' (ext LO)	1800 - 2100 MHz (LO/2)
TX LO level (ext LO)	0 dBm +/-2.0 dB

Note: Specifications are subject to change without notice.



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