1.5.2
18 GHz
Up/Down Converter
Data Sheet

MicroKim
Leading Communication Technologies

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. Possible applications of these modules range from high-end modules for military and industrial applications to low-cost modules for general commercial applications.

GENERAL SPECIFICATIONS

TX

TX Operating Freq'	17.7 - 18.7 GHz
TX Output Power (P1dB)	Min. +10 dBm
TX OIP3	Min. +18 dBm
TX NF	Max. 15 dB
TX Power Monitoring Accuracy	+/-2 dBm +/-1.0 dB (over freq' & temp')
TX Gain Variation With temp.	+/-2 dB
Transmitter Stability	Within any Return loss level
Transmit Spurious	In band 17.7 - 19.7 GHz - 55 dBc @ 30KHz RBW
LO leakage	-40 dBm
Out of band	-50 dBm
Transmit Gain	15 dB Min.
Transmit Gain Variation	+/-0.5dB Max within any 30MHz BW
Transmit Group Delay Variation	+/-1ns Max within any 30 MHz BW by simulation
Transmit RF return loss	12 dB Min.
Transmit IF Freq'	2400 - 2500 MHz
Transmit IF return loss	Min 12 dB
Transmit If Power	-3+/-3 dBm
Transmit Phase Noise	@ 1 KHz -85 dBc/Hz @ 10 KHz -90 dBc/Hz @ 100 KHz -96 dBc/Hz @ 1 MHz -110 dBc/Hz

GENERAL

Connectors RF, LO, IF	SMA (F)
Dimensions	130 x 65 x 20 mm (x 2)
Power Requirements	15 to 24VDC, 1A max.
Operating Conditions	ETS 300 019 class 4.1E
Operating Temperature	0 to 60°C
Operating Temperature	0 to 60 °C

GENERAL SPECIFICATIONS

RX

RX Operating Freq'	17.7 - 18.7 GHz
Receiving Noise Figure	< 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
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 (1400 -2400MHz)	<-45 dBc
Receiver Image Rejection	-20 dBc
Receiver RF Input P	1dB -15 dBm
Receiver RF Input IP3	-8 dB
Receiver IF Freq'	2100 - 2200 MHz
Receiver IF Return Loss	12 dB Min.
Receiver Phase Noise	@ 1 KHz -85 dBc/Hz @ 10 KHz -90 dBc/Hz @ 100 KHz -96 dBc/Hz @ 1 MHz -110 dBc/Hz

Note: *Specifications are subject to change without notice.*

MicroKim
3 Ha'Yozma St.
P.O. Box 2023
Tirat Carmel, 39120
Israel

Tel: +972 (0)4 813-5400
Fax: +972 (0)4 858-0534
Email: marketing@microkim.com
Website: www.microkim.com