

TRI-BAND DOWNCONVERTER

MODEL: DCTB-036128

FEATURES

- Three bands of operation covering S-, C- and X-bands
- Image rejection greater than 80 dB
- 2 GHz IF frequency
- LO leakage less than -80 dBm



SPECIFICATIONS

PARAMETERS	LIMITS	CONDITIONS
RF input frequency range		
Band 1	3.62–4.2 GHz	
Band 2	7.25–7.75 GHz	
Band 3a	10.95–11.9 GHz	
Band 3b	11.7–12.75 GHz	
RF input power	-18 dBm nominal	
IF output frequency	2 GHz	
LO power		
LO = 5.62–6.2 GHz	15 dBm	
LO = 9.25–14.75 GHz	10–11 dBm	
Conversion loss	16 dB maximum	
Gain flatness	0.2 dB for any 40 MHz segment, 1 dB over any frequency band	Over 0 to 50°C
Gain variation between any 2 bands	1 dB maximum	
Group delay (any 40 MHz band)		Over 0 to 50°C
Linear	.01 ns/MHz maximum	
Parabolic	.005 ns/MHz, 2 maximum	
Ripple	0.5 ns p-p	
Input/output VSWR	1.5:1 maximum	
Output power (1 dB compression)	-8 dBm minimum	
Spurious	Signal related -65 dBc maximum	Signal level -18 dBm
DC voltage supply	5 V	
Connectors, RF, IF, LO	SMA female	
Connector, DC	Multipin MDM-9P (ITT)	
Frequency rejections		
Band 1: a) Image = 7.62–8.2 GHz	> 80 dBc	
b) LO = 5.62–6.2 GHz	< -80 dBm input, < -90 dBm output	
Band 2: a) Image = 11.25–11.75 GHz	> 80 dBc	
b) LO = 9.25–9.75 GHz	< -80 dBm input, < -90 dBm output	
Band 3: a) Image = 14.95–16.75 GHz	> 80 dBc	
b) LO = 12.95–14.75 GHz	< -80 dBm input, < -90 dBm output	
Control	Open Ckt = OFF, GND = Band select	
Weight	30 grams	

ENVIRONMENTAL CONDITIONS

Operating temperature..... 0 to 70°C

Storage temperature..... -30 to +85°C

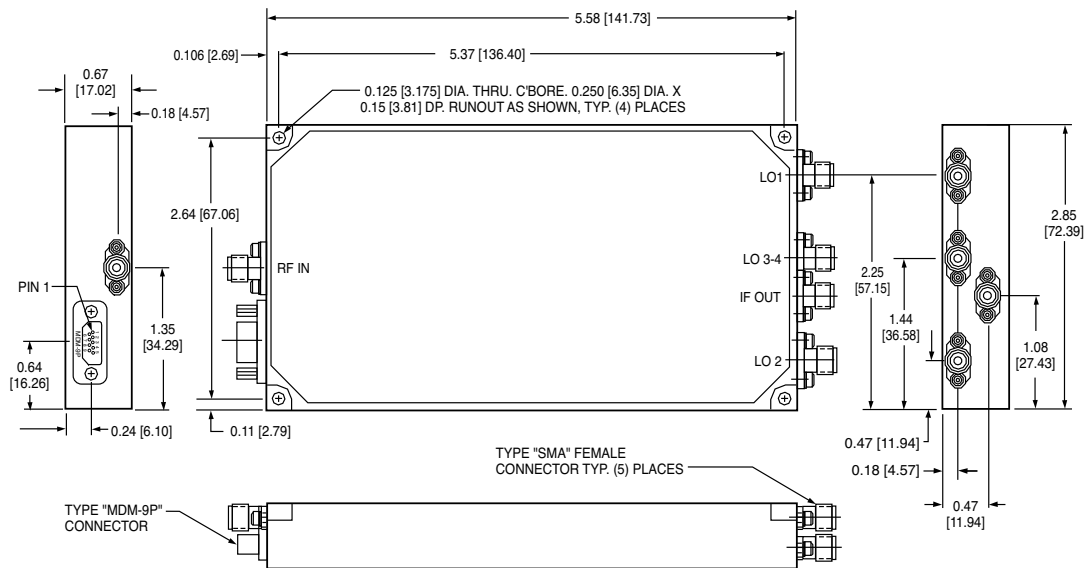
Humidity..... 95% noncondensing

Vibration..... 12 g's rms, 20-2000 Hz per MIL-STD-810B Method 514, Procedure 5



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OUTLINE DRAWING



GENERAL NOTES:

1. Dimensions shown in brackets [] are in millimeters.
2. Tolerance as follows: .xx = ± 0.01 [.xx = ± 0.25], .xxx = ± 0.005 [.xxx = ± 0.13]