



SM5T



WIDEBAND LOAD INSENSITIVE MIXER

- LO 50 TO 5000 MHz
- RF 50 TO 5000 MHz
- IF 50 TO 3000 MHz
- LO DRIVE +10 dBm (NOMINAL)
- INSENSITIVE TO SYSTEM LOAD MISMATCH
- HIGH INTERCEPT: +18 dBm (TYP.)

Specifications (Rev. Date: 4/02)*

Characteristics	Typical	Guaranteed	
		+25°C	-40° to +85°C
SSB Conversion Loss & SSB Noise Figure (max.)			
f_R 0.05 to 1.5 GHz f_L 1.5 to 3.0 GHz f_I 0.05 to 1.5 GHz	6.9 dB	8.3 dB	9.0 dB
f_R 1.5 to 3.0 GHz f_L 1.5 to 3.0 GHz f_I 0.05 to 3.0 GHz	7.5 dB	8.8 dB	9.5 dB
f_R 3.0 to 5.0 GHz f_L 3.0 to 5.0 GHz f_I 0.05 to 3.0 GHz	8.5 dB	10.5 dB	11.2 dB
Isolation (min.)			
L to R f_L = 0.05 to 1.0 GHz, f_L = 1.0 to 5.0 GHz	35 dB 33 dB	25 dB 23 dB	23 dB 21 dB
L to I f_L = 0.05 to 1.0 GHz f_L = 1.0 to 5.0 GHz	40 dB 35 dB	32 dB 25 dB	30 dB 23 dB
R to I f_R = 0.05 to 5.0 GHz	32 dB		
1 dB Conversion Compression f_I @ +10 dBm	+7.0 dBm		
Input IP3 (min.) f_L = 0.05 to 5.0 GHz & f_R = 0.05 to 5.0 GHz f_I = 0.05 to 3.0 GHz	+18 dBm		
VSWR			
R-Port f_R = 0.05 to 5.0 GHz	1.8:1		
L-Port f_L = 0.05 to 5.0 GHz	1.6:1		
I-Port f_I = 0.05 to 3.0 GHz	1.4:1		

*Measured in a 50-ohm system with nominal LO drive level and as a downconverter application only, unless otherwise specified.

Absolute Maximum Ratings

Operating Temperature	-54°C to +100°C
Storage Temperature	-65°C to +100°C
Peak Input Power	+20 dBm max. at +25°C, +17 dBm at +100°C
Peak Input Current	50 mA DC

Outline Drawing(s)

Package	Figure	Model
Surface Mount	SM5T	AE