



# 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 $f_I$ 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 $f_I$ 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,	35 dB	25 dB	23 dB
$f_L$ = 1.0 to 5.0 GHz	33 dB	23 dB	21 dB
L to I			
$f_L$ = 0.05 to 1.0 GHz	40 dB	32 dB	30 dB
$f_L$ = 1.0 to 5.0 GHz	35 dB	25 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.)			
$f_I$ = 0.05 to 5.0 GHz    & $f_R$ = 0.05 to 5.0 GHz	+18 dBm		
$f_I$ = 0.05 to 3.0 GHz			
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