

RF Amplifier

Low Noise: 1.4 dB

Model TM7270

10 to 250 MHz

Features

- Low Noise Figure: 1.4 dB Typical
- High Efficiency: +15 dBm @ 15 mA Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10-250 MHz	10-250 MHz
Gain (dB)	8.3	7.0 Min.
Power @ 1 dB Comp. (dBm)	+13* +15**	+11.0* Min. +13.0** Min.
Reverse Isolation (dB)	-10.5	-10.0 Max.
VSWR In	1.5:1	1.8:1 Max.
Out	1.3:1	1.8:1 Max.
Noise Figure (dB)	1.4	2.5 Max.
Power Vdc	+15	+15 Min.
mA	15	18 Max.

Note: Care should always be taken to effectively ground the case of each unit.

Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +55 dBm (Typ.)
 Second Order Two Tone Intercept Point..... +50 dBm (Typ.)
 Third Order Two Tone Intercept Point..... +30 dBm (Typ.)

Maximum Ratings

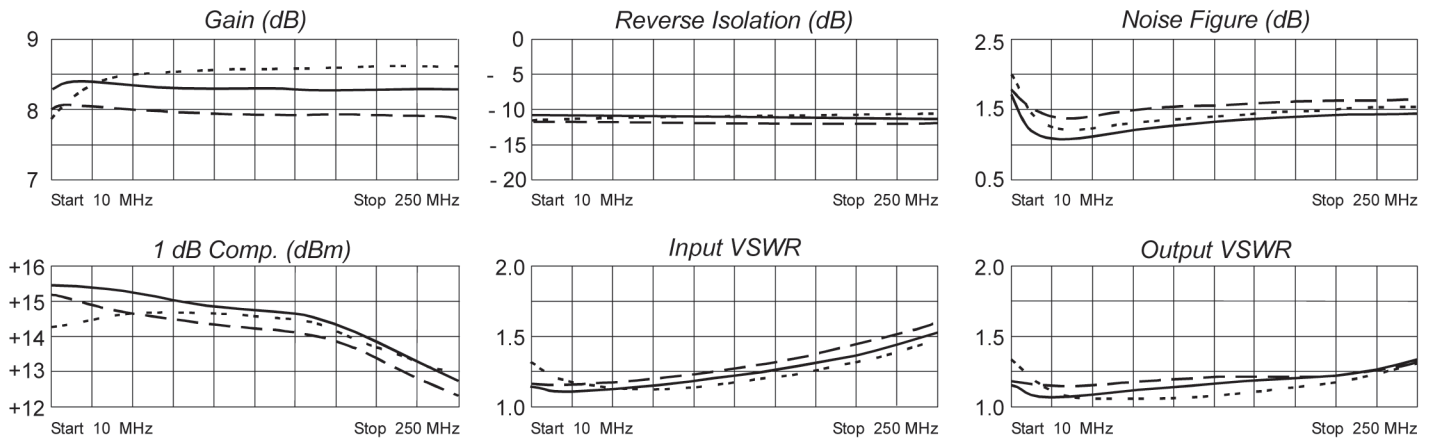
Ambient Operating Temperature -55°C to + 100 °C
 Storage Temperature -62°C to + 125 °C
 Case Temperature + 125 °C
 DC Voltage + 18 Volts
 Continuous RF Input Power + 13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Packaging Options (see Appendix)

TM7270, 4 Pin TO-8 (T4)
 TN7270, 4 Pin Surface Mount (SM3)
 FP7270, 4 Pin Flatpack (FP4)
 BX7270, Connectorized Housing (H1)

* Frequency = 10-250 MHz
 ** Frequency = 10-160 MHz

Typical Performance Data



Legend ——— + 25 °C - - - - + 85 °C ······ -55 °C

Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
5	.06	135	2.43	10	.27	10	.08	146
10	.04	128	2.48	4	.28	4	.04	148
20	.03	125	2.50	-2	.28	-1	.03	-156
50	.05	170	2.49	-10	.28	-10	.08	-136
100	.12	-171	2.47	-21	.27	-20	.12	-151
150	.20	-160	2.50	-32	.27	-32	.11	-151
200	.25	-157	2.49	-44	.26	-43	.15	-132
250	.26	-166	2.45	-55	.24	-55	.24	-140
300	.31	174	2.41	-67	.22	-66	.32	-154

