

RF AMPLIFIER

MODEL *TM7170*

Available as: TM7170, 4 Pin TO-8 (T4)
 TN7170, 4 Pin Surface Mount (SM3)
 FP7170, 4 Pin Flatpack (FP4)
 BX7170, Connectorized Housing (H1)

Features

- Low Noise Figure: <1.5 dB Typical
- High Efficiency: +10 dBm @ 11.5 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)	8.5	7.5 Min.
Power @ 1 dB Comp. (dBm)	+10	+9.0 Min.
Reverse Isolation (dB)	-9.5	-9.0 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	<1.5	2.5 Max.
Power Vdc	+15	+15 Min.
mA	11.5	12.5 Max.

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

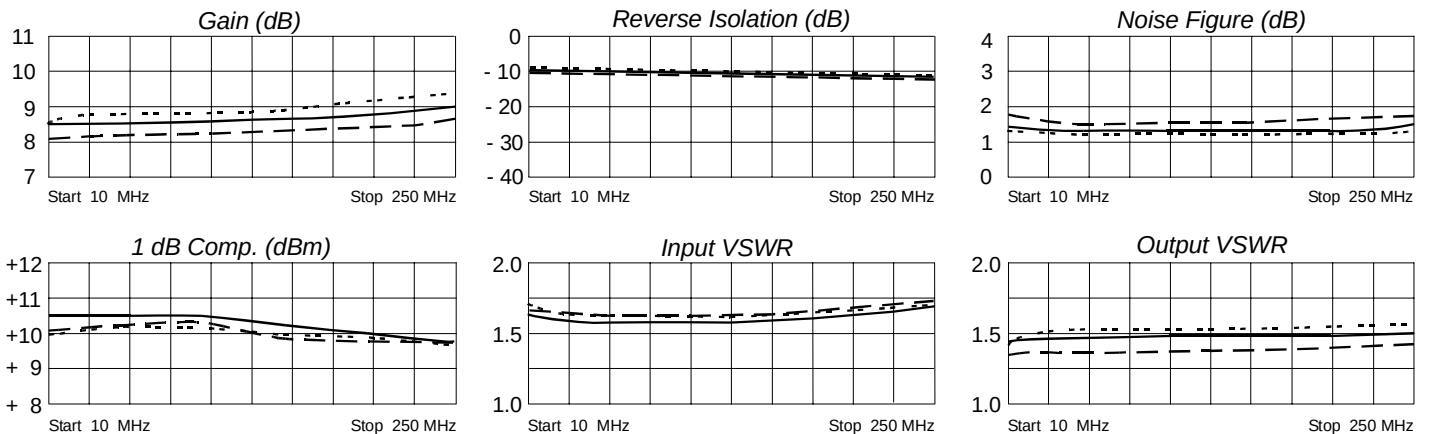
Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point..... +44 dBm (Typ.)
 Second Order Two Tone Intercept Point..... +38 dBm (Typ.)
 Third Order Two Tone Intercept Point..... +26 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.)

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
10	.23	179	2.64	3	.27	3	.18	10
20	.22	177	2.67	-1	.27	-1	.19	2
50	.22	173	2.67	-8	.27	-7	.19	-8
100	.23	168	2.68	-18	.26	-16	.19	-22
150	.23	164	2.71	-27	.26	-25	.19	-35
200	.24	161	2.76	-37	.25	-33	.20	-51
250	.26	158	2.82	-47	.24	-43	.20	-69
300	.29	156	2.92	-57	.22	-52	.22	-90



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