

RF Amplifier

Low Noise: <1.8 dB

Model TM5853

100 to 300 MHz

Features

- Low Noise Figure: <1.8 dB Typical
- High Output Power: +22.5 dBm 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	100 - 300 MHz	100 - 300 MHz
Gain (dB)	33.5	32.0 Min.
Power @ 1 dB Comp. (dBm)	+22.5	+20.5 Min.
Reverse Isolation (dB)	-37	-35 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	<1.8	2.2 Max.
Power Vdc	+15	+15
mA	87	95 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 +50 dBm (Typ.)
 Second Order Two Tone Intercept Point +45 dBm (Typ.)
 Third Order Two Tone Intercept Point +36 dBm (Typ.)

Maximum Ratings

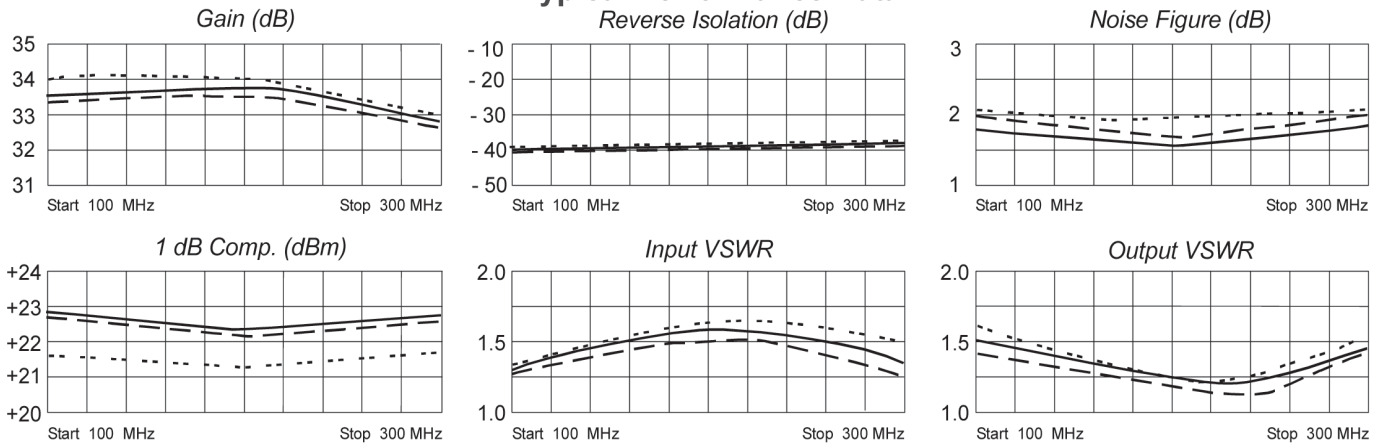
Ambient Operating Temperature -55°C to + 100 °C
 Storage Temperature -62°C to + 125 °C
 Case Temperature + 125 °C
 DC Voltage + 18 Volts
 Continuous RF Input Power + 13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Packaging Options (see Appendix)

TR5853, 4 Pin TO-8B (T8)
 RN5853, 4 Pin Surface Mount (SM19)
 BR5853, Connectorized Housing (H2)

Amplifiers

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
100	.14	100	46.50	48	.01	51	.20	45
125	.17	117	47.10	62	.01	72	.18	58
150	.18	130	47.02	76	.01	82	.14	76
175	.21	143	48.47	91	.01	101	.11	87
200	.23	157	48.66	100	.01	122	.06	131
225	.23	173	48.41	121	.01	134	.06	177
250	.22	170	47.52	137	.01	153	.11	147
275	.18	100	45.84	153	.01	163	.15	123
300	.15	174	43.51	160	.01	170	.18	106

