

# RF AMPLIFIER

## MODEL **TM6131**

Available as: TM6131, 4 Pin TO-8 (T4)  
 TN6131, 4 Pin Surface Mount (SM3)  
 FP6131, 4 Pin Flatpack (FP4)  
 BX6131, Connectorized Housing (H1)

### Features

- High Intercept: +37 dBm Typical
- High Output Power: +20 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	5 - 500 MHz	10 - 500 MHz
Gain (dB)	10.3	9 min/ 11 max
Power @ 1 dB Comp. (dBm)	+20	+18.0 Min.
Reverse Isolation (dB)	- 22	- 20 Max.
VSWR In	1.25:1	2.0:1 Max.
VSWR Out	1.25:1	2.0:1 Max.
Noise figure (dB)	4.5	6.5 Max.
Power Vdc	+15	+15 Max.
Power mA	62	70 Max.

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

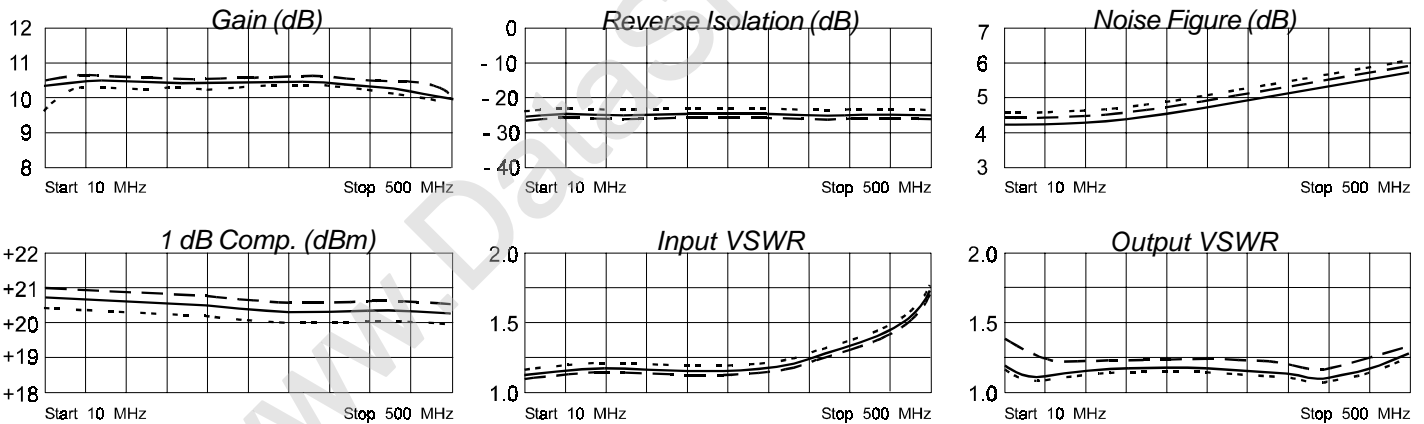
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +56 (Typ.)  
 Second Order Two Tone Intercept Point ..... +50 (Typ.)  
 Third Order Two Tone Intercept Point ..... +37 (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
5	.11	- 41	3.39	-156	.08	-157	.09	-105
50	.07	- 16	3.49	168	.08	167	.05	149
100	.06	- 17	3.47	152	.08	149	.06	105
200	.05	- 47	3.50	123	.08	119	.09	48
300	.05	-133	3.55	94	.09	91	.08	- 11
400	.14	159	3.57	61	.10	64	.07	- 87
500	.29	120	3.40	25	.11	35	.10	-178

# Amplifonix

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