

# RF AMPLIFIER

## MODEL *TM6705*

Available as: TM6705, 4 Pin TO-8 (T4)  
 TN6705, 4 Pin Surface Mount (SM3)  
 FP6705, 4 Pin Flatpack (FP4)  
 BX6705, Connectorized Housing (H1)

### Features

- High IP3: +37 dBm Typical
- High Output Power: +20 dBm Typical
- Bipolar Design
- Environmental Screening Available

### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point.....+56 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+50 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +37 dBm (Typ.)

### Specifications

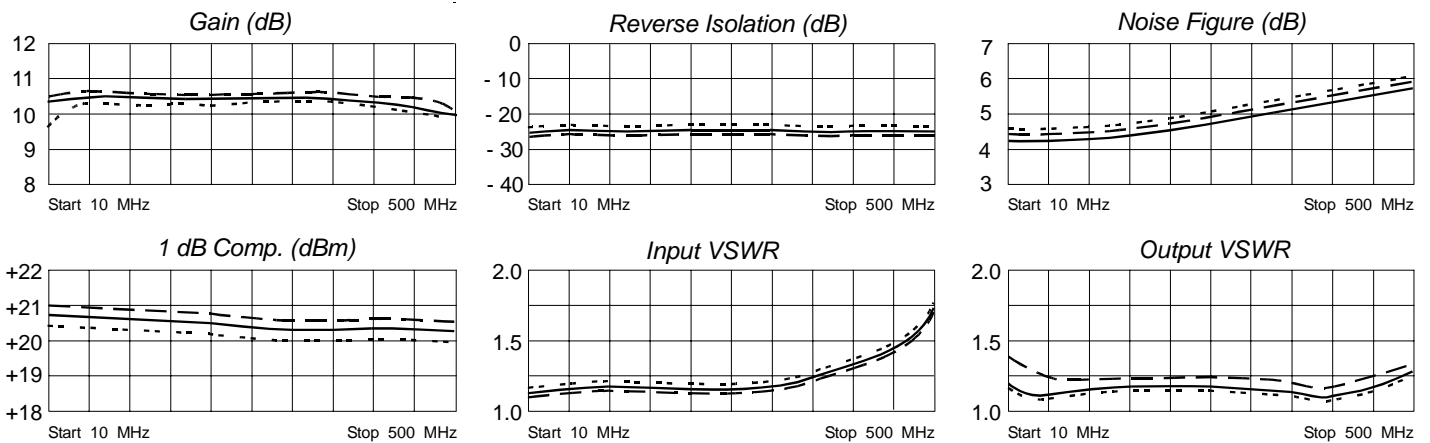
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 500 MHz	10 - 500 MHz
Gain (dB)	10.5	9 Min./11 Max.
Power @ 1 dB Comp. (dBm)	+20	+18 Min.
Reverse Isolation (dB)	-22	-20 Max.
VSWR In	1.25:1	2.0:1 Max.
Out	1.25:1	2.0:1 Max.
Noise Figure (dB)	4.5	6.5 Max.
Power Vdc	+15	+15
mA	62	70 Max.

### 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.)

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

### 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



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