

RF AMPLIFIER

MODEL *TM9512PM*

Available as: TM9512PM, 4 Pin TO-8 (T4)
 TN9512PM, 4 Pin Surface Mount (SM3)
 FP9512PM, 4 Pin Flatpack (FP4)
 BX9512PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Higher Power: +21 dBm Typical
- Lower +12 volt supply
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 1000 MHz	10 - 1000 MHz
Gain (dB)	13	11 Min.
Power @ 1 dB Comp. (dBm)	+21	+19 Min.
Reverse Isolation (dB)	-15	-13 Max.
VSWR In	1.5:1	2.0:1 Max.
VSWR Out	1.5:1	2.0:1 Max.
Noise Figure (dB)	4.5	6.5 Max.
Power Vdc	+12	+12 Min.
mA	90	100 Max.

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

Revision April 19, 2023

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 +35 dBm (Typ.)

(Absolute) Maximum (NO DAMAGE) Ratings

Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +15 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.)

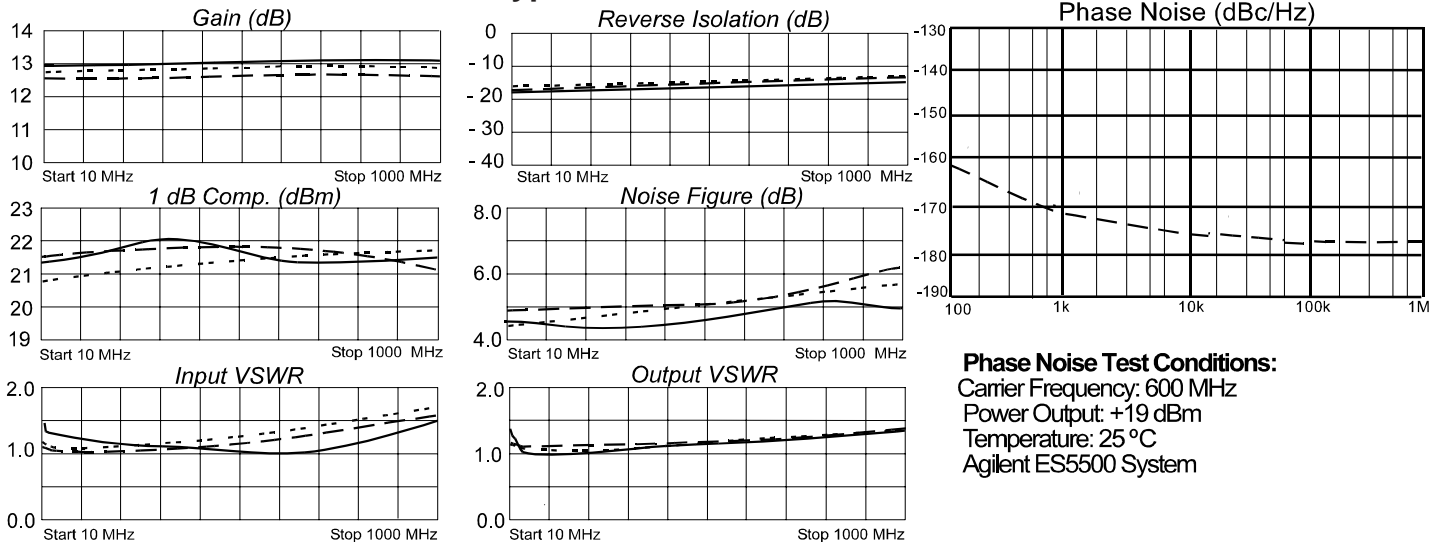
MTBF Calculation for Ground Benign Environment

@ 25 °C 4,269,871.84 hrs

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee (Max.)
100 Hz	-162	---
1 kHz	-168	---
10 kHz	-173	---
100 kHz	-175	---
1 MHz	-175	---

Typical Performance Data



Phase Noise Test Conditions:

Carrier Frequency: 600 MHz
 Power Output: +19 dBm
 Temperature: 25 °C
 Agilent ES5500 System

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	.09	-56	4.45	-173	.11	10	.09	116
100	.04	14	4.53	166	.11	0	.04	120
200	.05	33	4.49	152	.12	1	.04	103
300	.06	50	4.50	139	.12	-1	.06	88
400	.07	54	4.51	125	.12	-3	.07	78
500	.10	59	4.50	111	.13	-7	.08	75
600	.12	63	4.51	98	.13	-7	.09	68
700	.15	61	4.47	84	.14	-10	.11	62
800	.18	58	4.43	70	.15	-14	.11	57
900	.22	54	4.32	56	.15	-19	.12	52
1000	.25	48	4.24	41	.16	-23	.13	47

