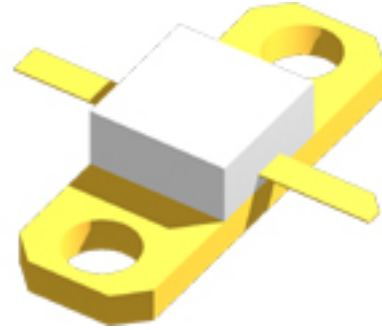


SILICON MICROWAVE POWER TRANSISTOR

PRODUCT DATA SHEET



FEATURES:

- Common Base, Class C Package Configuration
- High Output Power
4 W @ 0.6 to 1.0 GHz
- High Gain Bandwidth Product
 $f_t = 6.0 \text{ GHz @ } I_C = 640 \text{ mA}$
- High Gain
 $G_{PE} = 7.0 \text{ dB to } 8.2 \text{ dB}$
- High Reliability
Gold Metallization
Nitride Passivation
- Diffused Ballast Resistors
- BeO Packaging
- Built-In Matching Network for Broadband Operation

PERFORMANCE DATA:

- Electrical Characteristics ($T_A = 25^\circ\text{C}$)

Absolute Maximum Ratings:

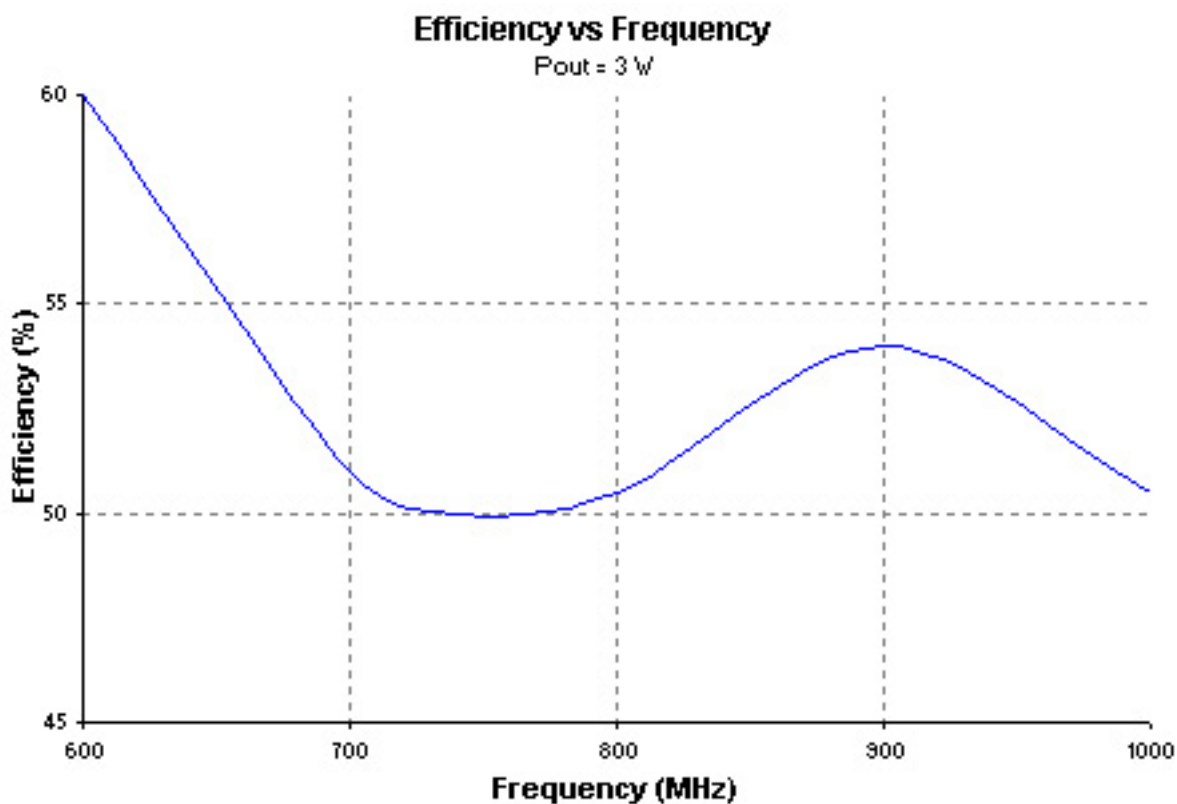
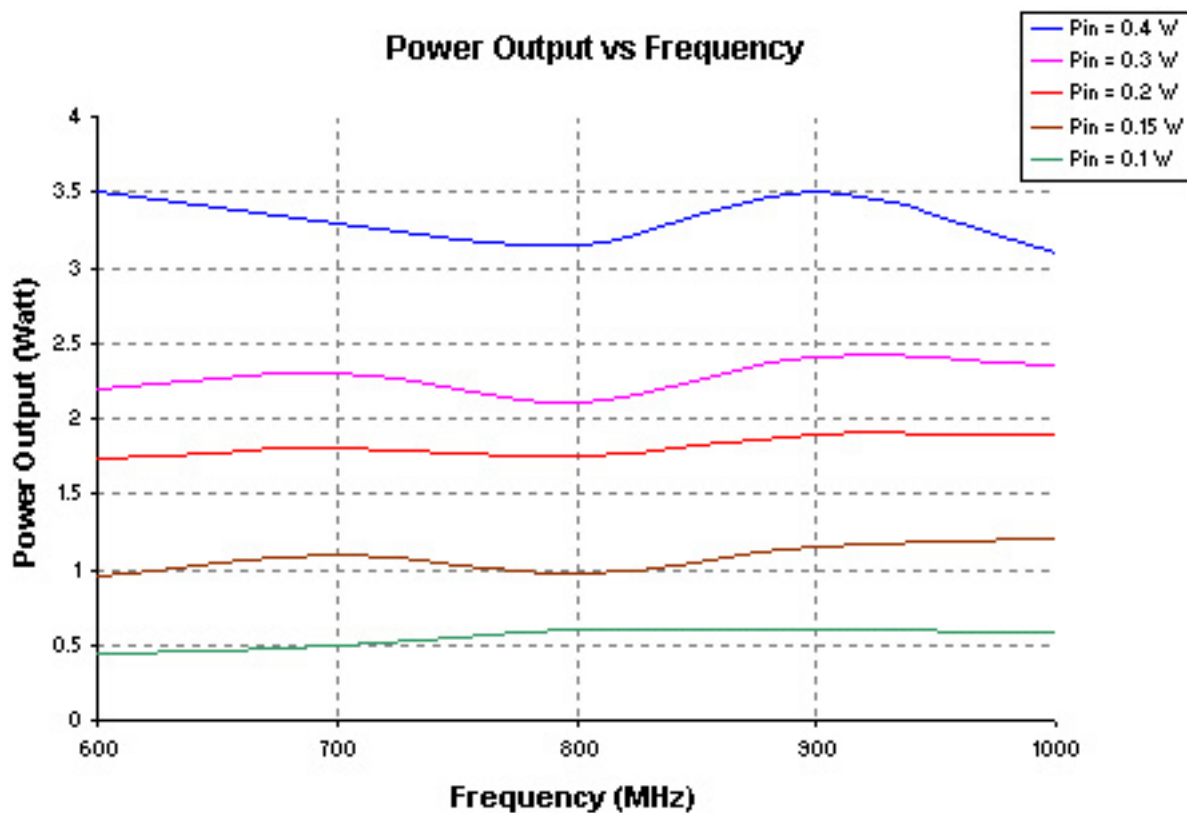
SYMBOL	PARAMETERS	RATING	UNITS
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	28	V
V_{EBO}	Emitter-Base Voltage	3.5	V
I_C	Collector Current (instantaneous)	640	mA
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{STG}	Storage Temperature	-65 to 200	$^\circ\text{C}$

θ_{JC}	Thermal Resistance	6.5	C/W
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SYMBOL	PARAMETERS & CONDITIONS $V_{CE} = 28\text{V}, I_C = 64 \text{ mA}, \text{Class C}$	UNIT	MIN.	TYP.	MAX.
P_{1dB}	Power output at 1 dB compression: $f = 1.4 \text{ GHz}$	W		4	
η	Collector Efficiency Class C	%		50	
h_{FE}	Forward Current Transfer Ratio: $V_{CB} = 5\text{V}, I_C = 100 \text{ mA}$		10	60	100
C_{OB}	Output Capacitance: $f = 1 \text{ MHz}, I_E = 0$	pF		4.5	
P_T	Total Power Dissipation	W		8	

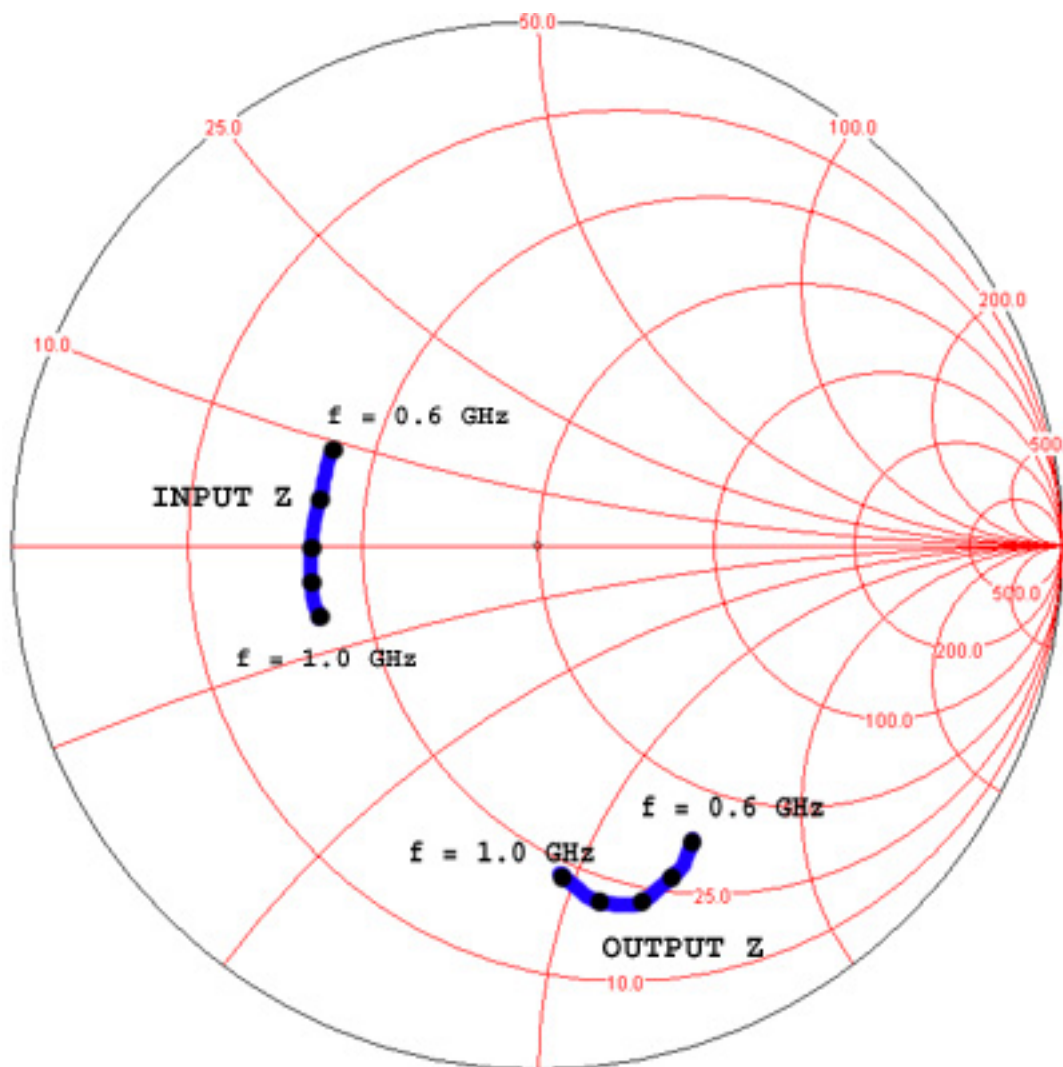
BIPOLARICS, INC. Part Number BMT0610B04

SILICON MICROWAVE POWER TRANSISTOR



BIPOLARICS, INC. Part Number BMT0610B04

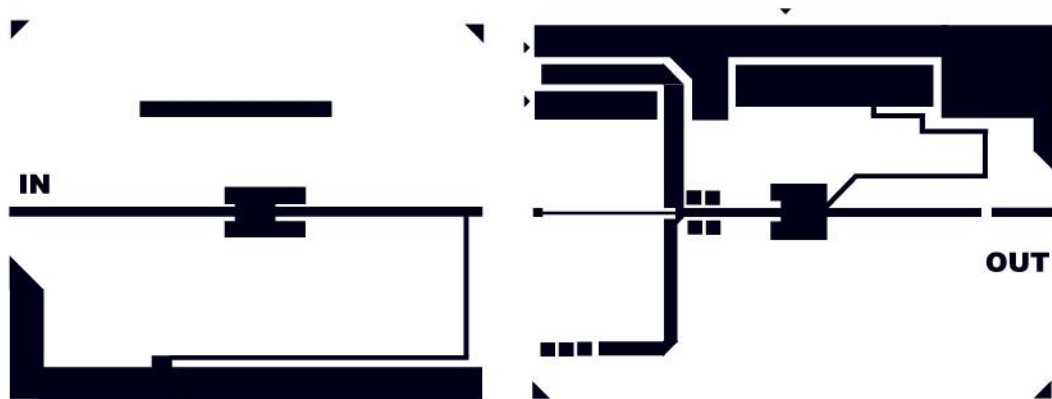
SILICON MICROWAVE POWER TRANSISTOR



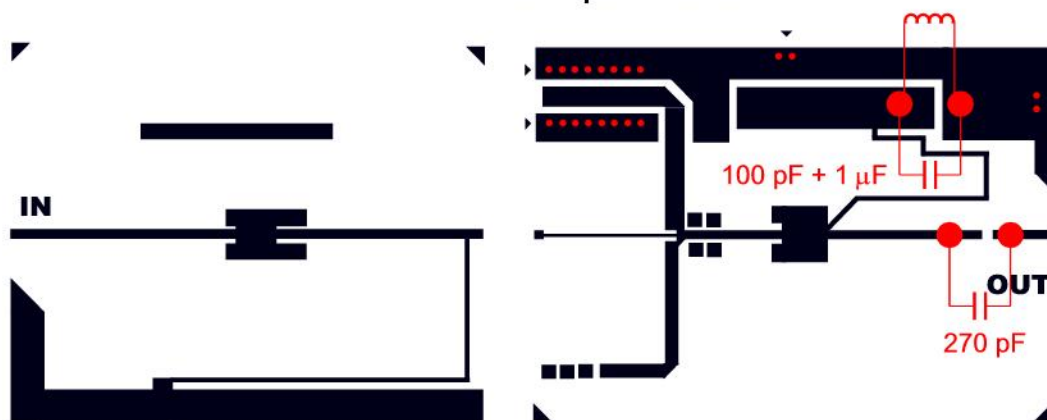
BIPOLARICS, INC. Part Number BMT0610B04

SILICON MICROWAVE POWER TRANSISTOR

Test Board Layout

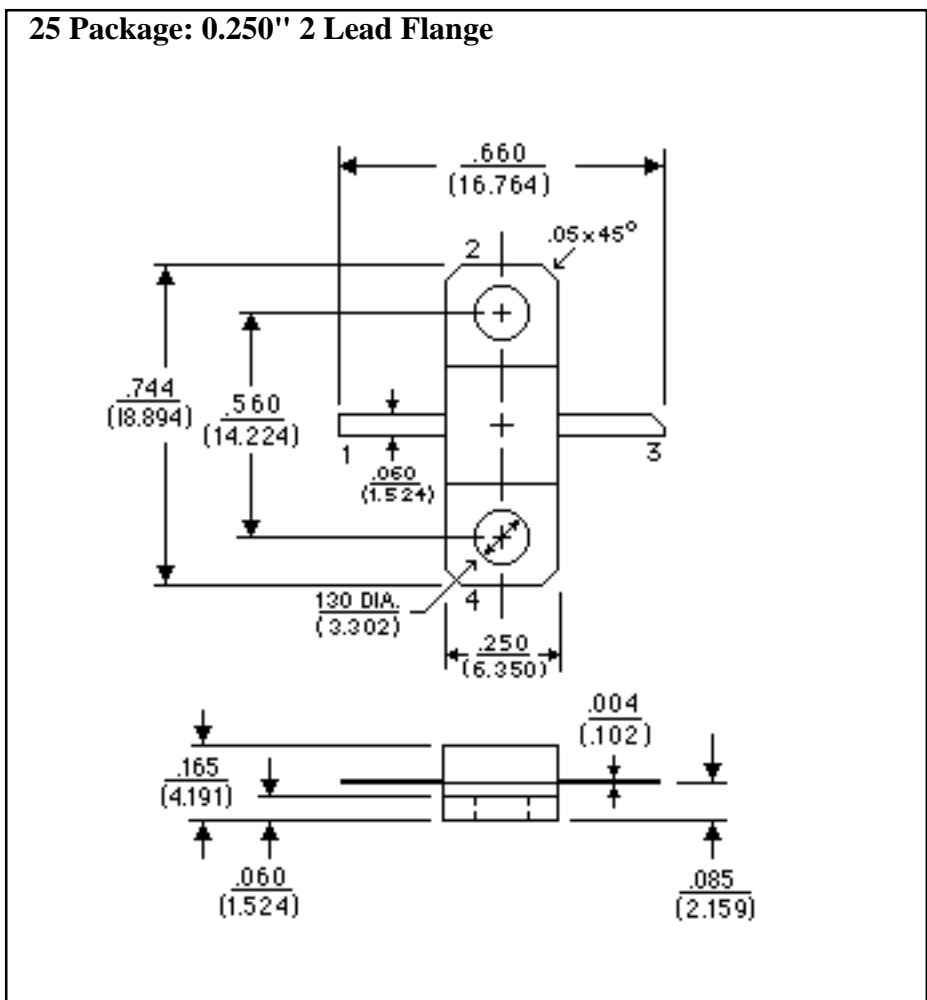


Test Board Components



BIPOLARICS, INC. Part Number BMT0610B04

SILICON MICROWAVE POWER TRANSISTOR



NOTES: (unless otherwise specified)

1. Dimensions are $\frac{\text{in}}{\text{mm}}$
2. Tolerances:
in .xxx = $\pm .005$
mm .xx = $\pm .13$
3. All dimensions nominal; subject to change without notice

LEAD	1	2	3	4
25 Package	Emitter	Base	Collector	Base

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