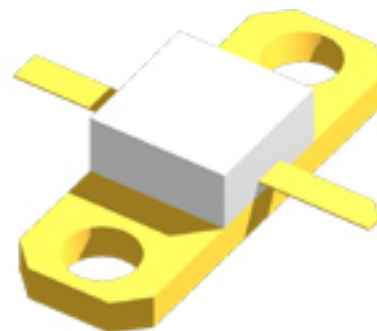


BIPOLARICS, INC**Part Number BMT1417B26****SILICON MICROWAVE POWER TRANSISTOR****PRODUCT DATA SHEET****FEATURES:**

- Common Base, Class C Package Configuration
- High Output Power
26 W @ 1.4 to 1.7 GHz
- High Gain Bandwidth Product
 $f_t = 6.0 \text{ GHz @ } I_C = 4.16 \text{ A}$
- 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 ($T_A = 25^\circ\text{C}$)

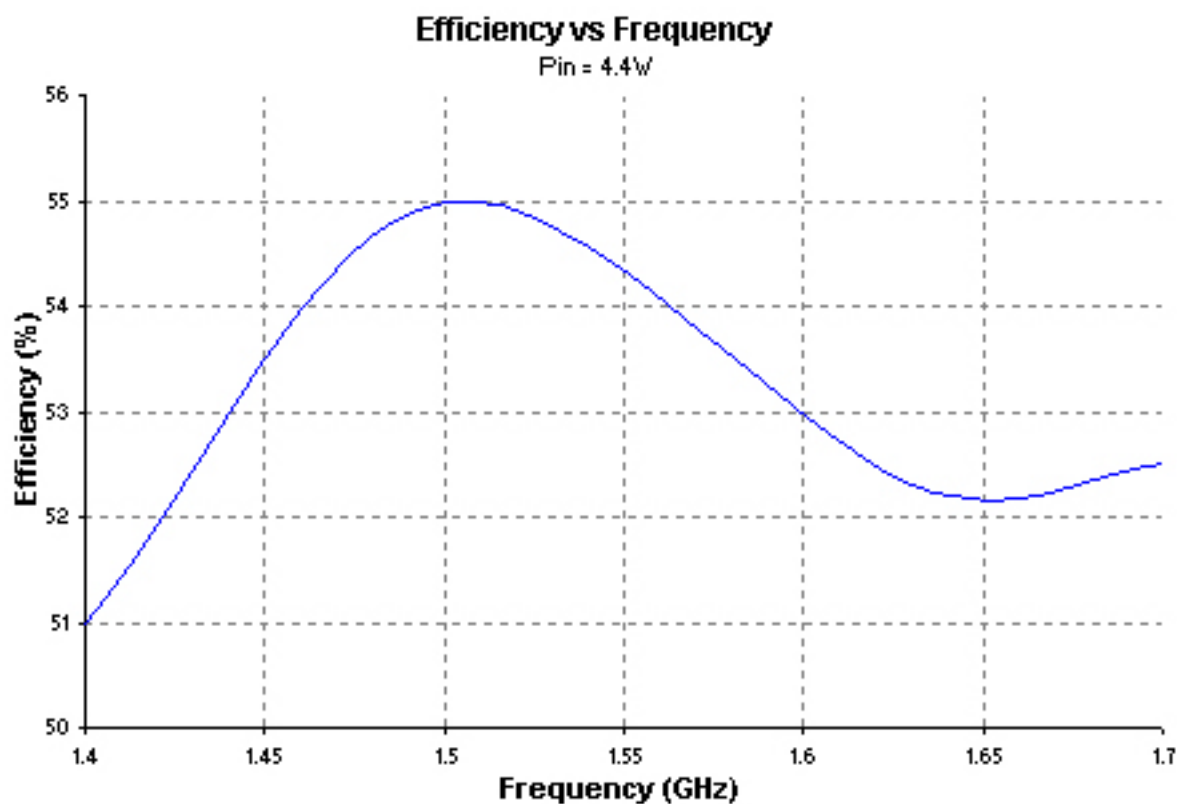
**Absolute Maximum Ratings:**

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)	4.16	A
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

SYMBOL	PARAMETERS & CONDITIONS $V_{CE} = 28\text{V}, I_C = 4.16 \text{ A}, \text{Class C}$	UNIT	MIN.	TYP.	MAX.
P_{1dB}	Power output at 1 dB compression: $f = 1.4 \text{ GHz}$	W		26	
η	Collector Efficiency Class C	%		50	
h_{FE}	Forward Current Transfer Ratio: $V_{CB} = 5\text{V}, I_C = 800 \text{ mA}$		10	---	100
C_{OB}	Output Capacitance: $f = 1 \text{ MHz}, I_E = 0$	pF		24	
P_T	Total Power Dissipation	W		52	

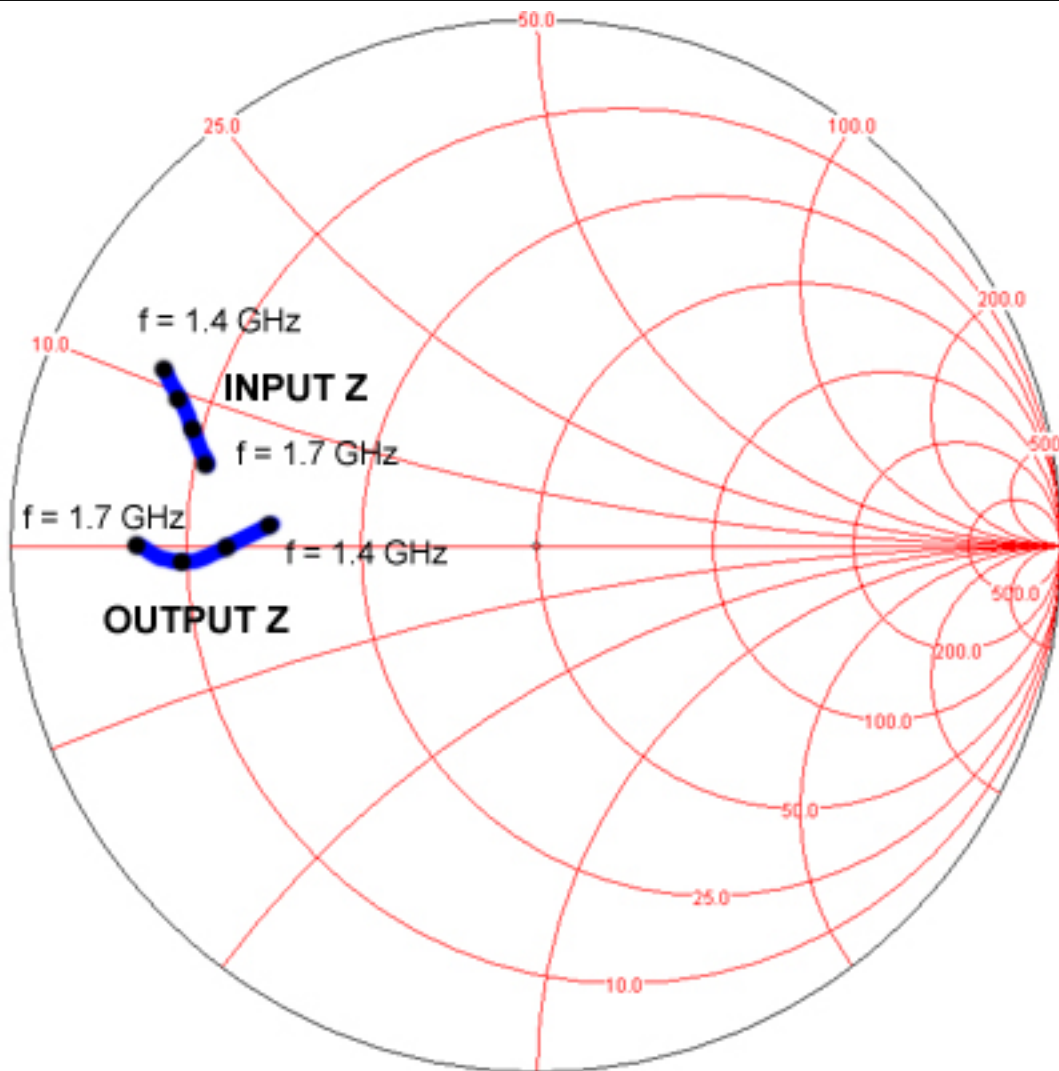
BIPOLARICS, INC. Part Number BMT1417B26

SILICON MICROWAVE POWER TRANSISTOR



BIPOLARICS, INC. Part Number BMT1417B26

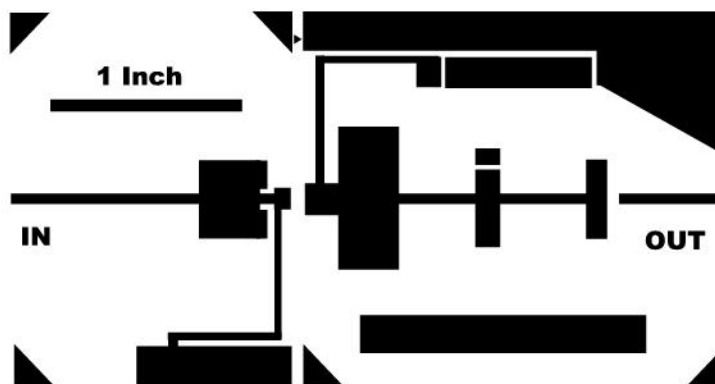
SILICON MICROWAVE POWER TRANSISTOR



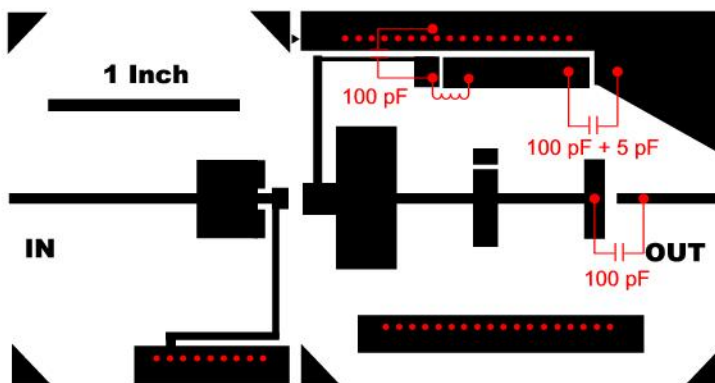
BIPOLARICS, INC. Part Number BMT1417B26

SILICON MICROWAVE POWER TRANSISTOR

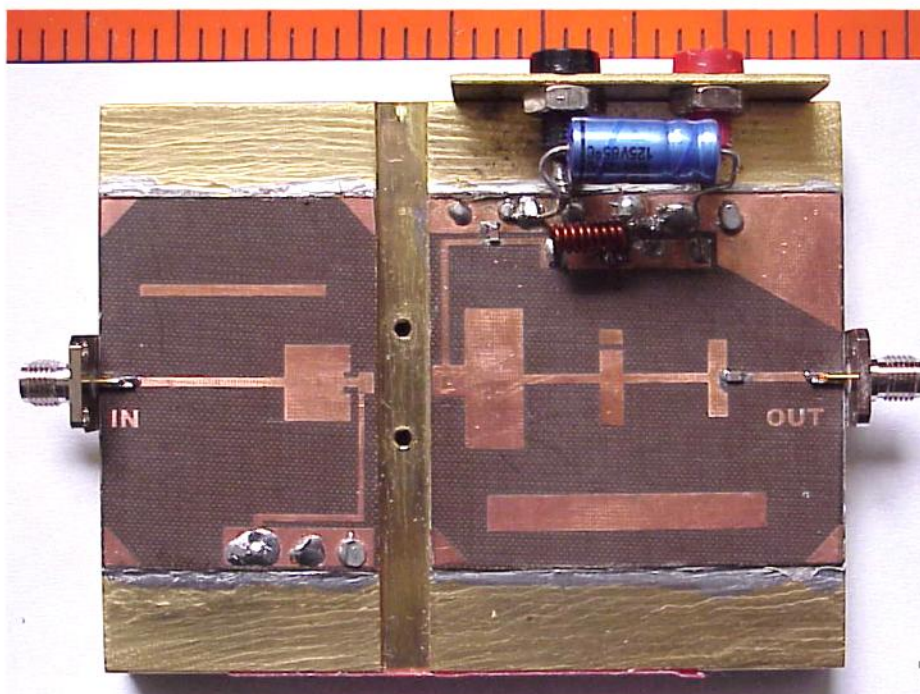
Test Board Layout



Test Board Components



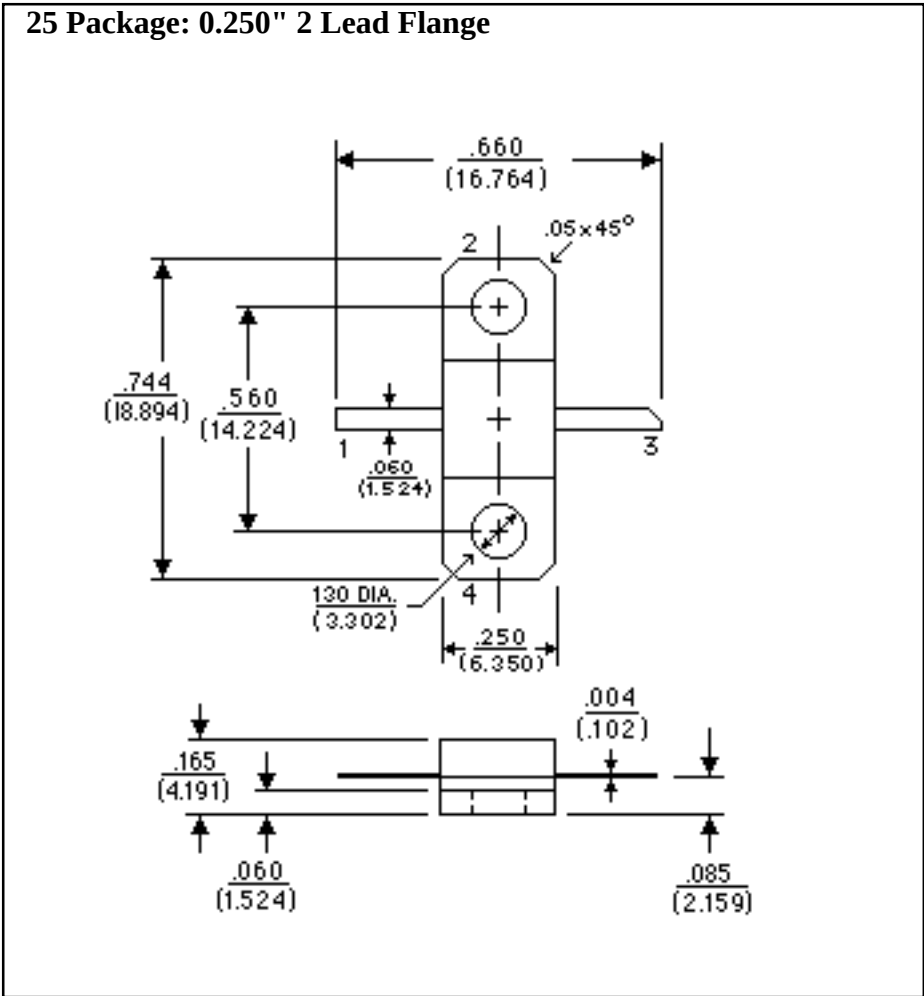
Substrate: 18 mil thick teflon fiberglass
... Ground connection thru substrate



BIPOLARICS, INC.

Part Number BMT1417B26

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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