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NTE318 Silicon NPN Transistor RF Power Output

Description:

The NTE318 is a 12.5V epitaxial silicon NPN planar transistor designed primarily for HF communications. This device utilizes improved metallization systems to achieve extreme ruggedness under severe operating conditions.

Features:

- Designed for HF military and commercial equipment 40W minimum with greater than 10.0dB gain
- Withstands severe mismatch under operating conditions
- Low inductance Stripline Package

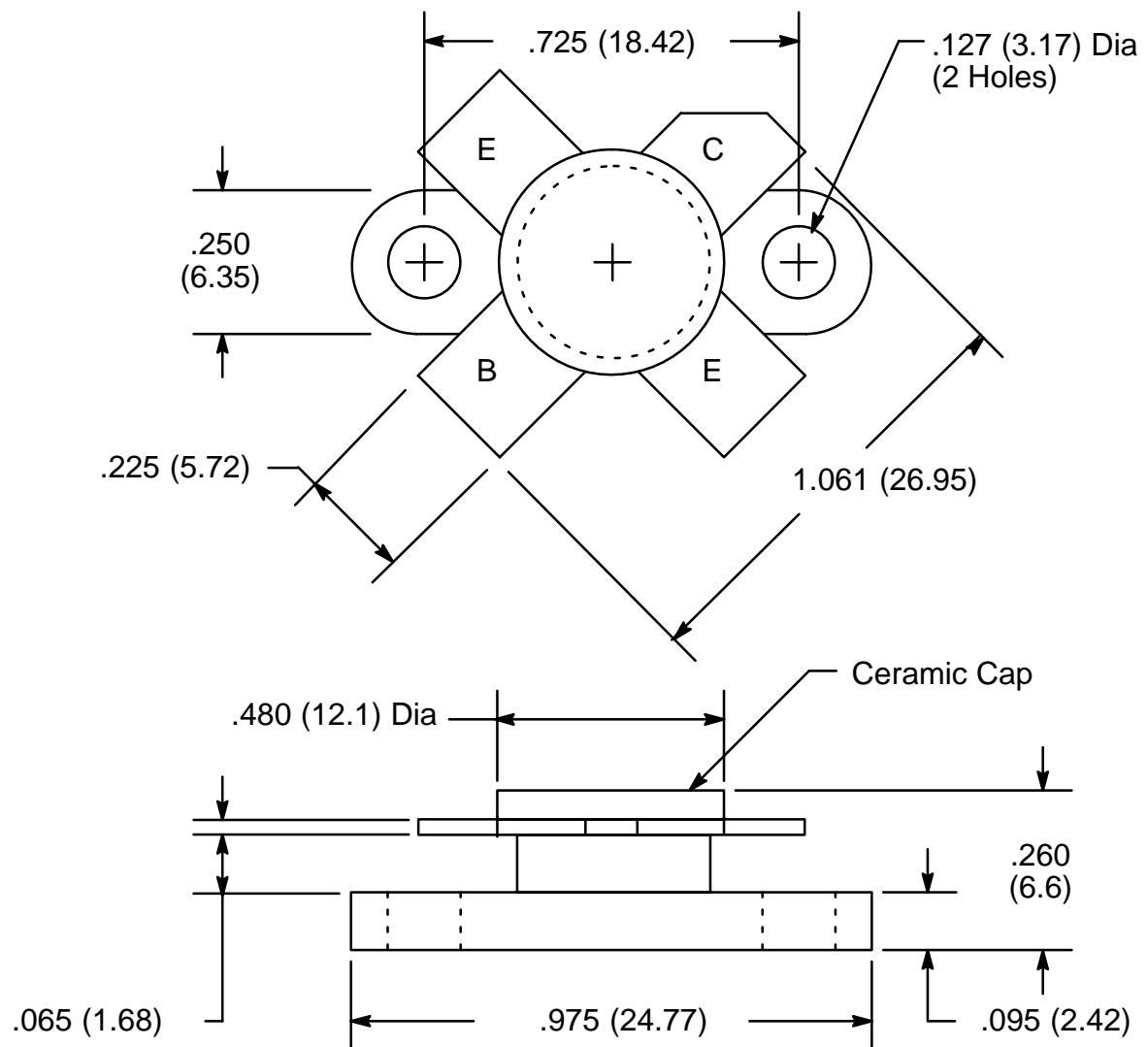
Absolute Maximum Ratings:

Collector Base Voltage, V_{CBO}	36V
Collector-Emitter Voltage, V_{CEO}	18V
Emitter-Base Voltage, V_{EBO}	4V
Maximum Collector Current, I_C	6A
Total Device Dissipation (+25°C), P_T	80W
Thermal Resistance, Junction-to-Case, R_{thJC}	2.2°C/W
Junction Temperature Range, T_J	-65° to +200°C
Storage Temperature Range, T_{stg}	-65° to +200°C

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 200\text{mA}$, $I_B = 0$, Note 1	18	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C = 200\text{mA}$, $V_{BE} = 0$, Note 1	36	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 2.5\text{mA}$, $I_C = 0$	4	—	—	V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 15\text{V}$, $I_E = 0$	—	—	1	mA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}$, $I_C = 250\text{mA}$	10	—	—	
Gain Bandwidth	f_t	$V_{CE} = 13.5\text{V}$, $I_C = 100\text{mA}$	200	—	—	MHz
Output Capacitance	C_{ob}	$V_{CB} = 12.5\text{V}$, $I_C = 0$, $-f_O = 1.0\text{MHz}$	—	—	200	pF
Amplifier Power Out	P_O	28MHz/12.5V	47	—	—	W
Amplifier Power Gain	P_g		10	—	—	dB

Note 1. Pulsed through 25mH Inductor



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