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NTE317
Silicon NPN Transistor
RF Power Output

Description:

The NTE317 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:

- 70W Minimum with Greater than 13.5dB Gain
- Withstands Severe Mismatch under Operating Conditions
- Emitter Ballasted
- Low Inductance Stripline Package

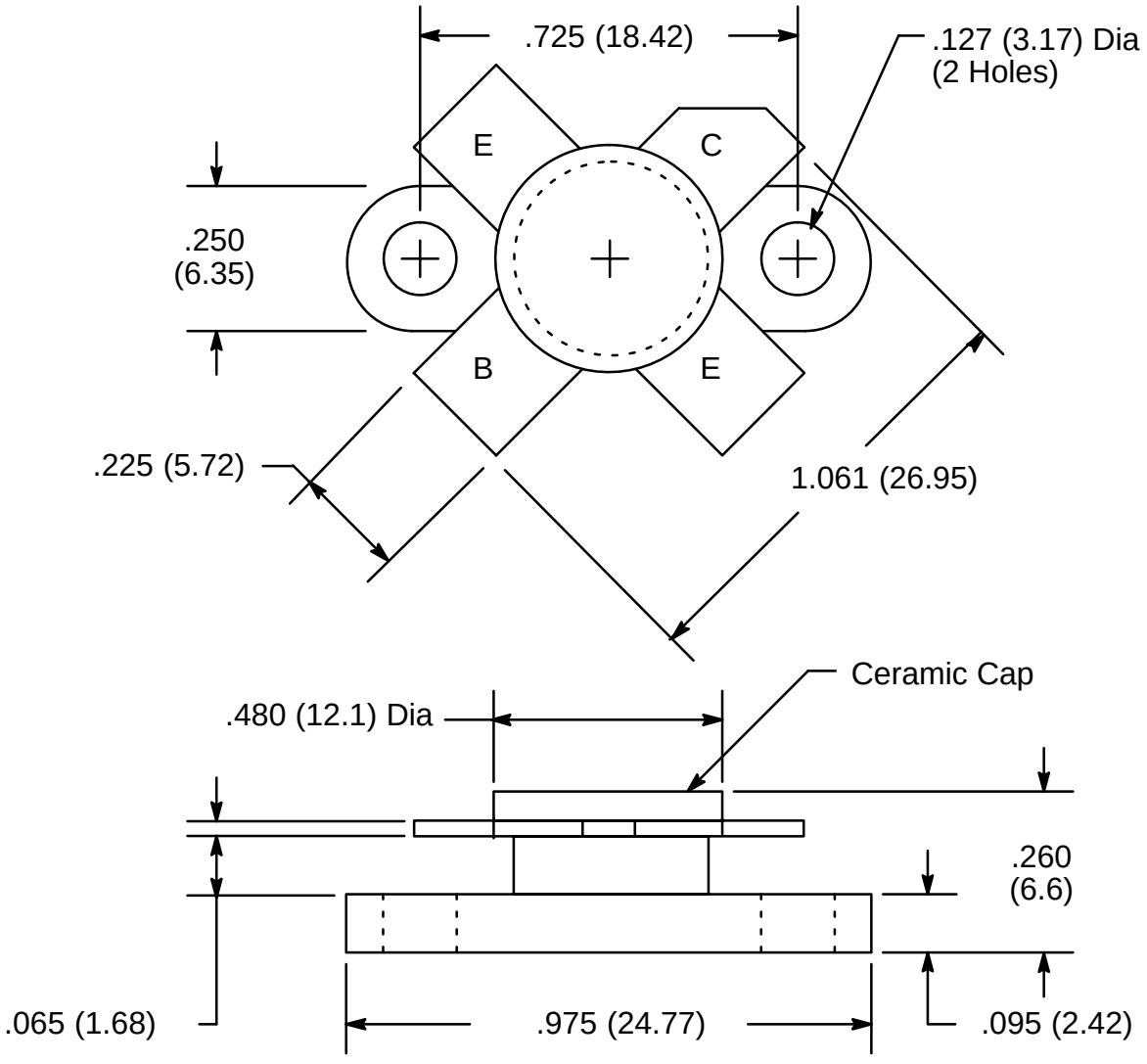
Absolute Maximum Ratings:

Collector Base Voltage, V_{CBO} 36V
Collector–Emitter Voltage, V_{CEO} 18V
Emitter–Base Voltage, V_{EBO} 4V
Maximum Collector Current, I_C 15A
Total Device Dissipation (+25°C), P_T 220W
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 0.8°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 = 50mA, I_B = 0, Note 1	18	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CES}$	I_C = 20mA, V_{BE} = 0, Note 1	36	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 5mA, I_C = 0	4	–	–	V
Collector Cut–Off Current	I_{CBO}	V_{CB} = 15V, I_E = 0	–	–	3	mA
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 5A	10	–	–	
Gain Bandwidth	f_t	V_{CE} = 13.5V, I_C = 100mA	200	–	–	MHz
Output Capacitance	C_{ob}	V_{CB} = 12.5V, I_C = 0, $–F_O$ = 1.0MHz	–	300	–	pF
Amplifier Power Out	P_O	30MHz/12.5V	70	–	–	W
Amplifier Power Gain	P_g		13.5	14.2	–	dB

Note 1. Pulsed through 25mH Inductor


.725 (18.42)
.127 (3.17) Dia
(2 Holes)
E
C
.250
(6.35)
B
E
.225 (5.72)
1.061 (26.95)
Ceramic Cap
.480 (12.1) Dia
.260
(6.6)
.065 (1.68)
.975 (24.77)
.095 (2.42)