ELECTRONICS, INC.
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NTE350F
Silicon NPN Transistor
RF Power AMP

Description:

The NTE350F is designed for 12.5 Volt large−signal amplifier applications required in commercial and industrial equipment operating to 300MHz.

Features:

- Specified 12.5 Volt, 175MHz Characteristics:
  Output Power = 15 Watts
  Minimum Gain = 6.3dB
  Efficiency = 60%
- Characterized with Series Equivalent Large−Signal Impedance Parameters

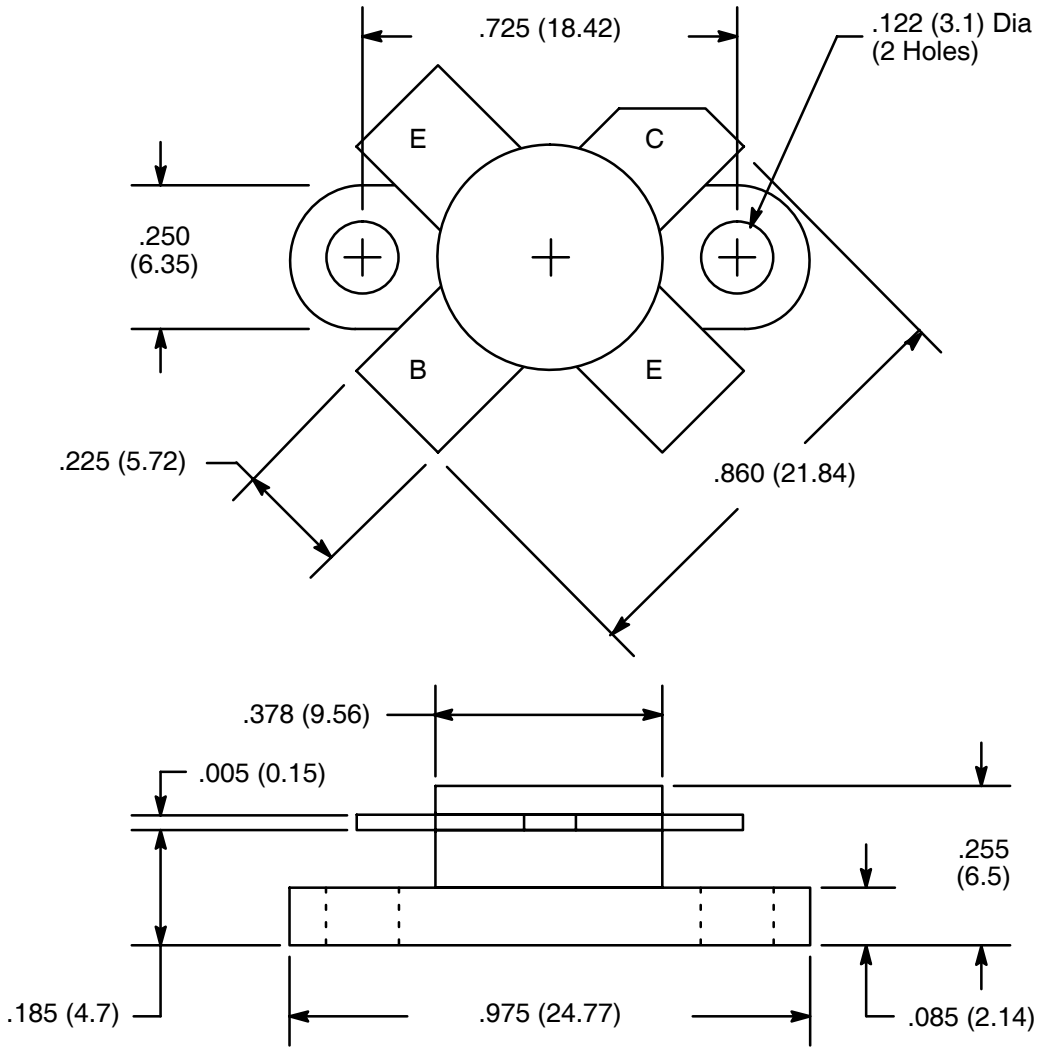
Absolute Maximum Ratings:

Collector−Emitter Voltage, V_{CEO} 18V
Collector−Base Voltage, V_{CB} 36V
Emitter−Base Voltage, V_{EB} 4V
Collector Current, I_C 2.5A
Total Device Dissipation, P_D
T_C = +25°C (Note 1) 31W
Derate above +25°C . . . . . 177W/°C
Storage Temperature Range, T_{stg} . . . . . −65° to +200°C

Note 1. Device is designed for RF operation. The total dissipation rating applies only when the devices are operated as RF amplifiers.

Electrical Characteristics: (T_C = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector−Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 20mA, I_B = 0	18	–	–	V
	$V_{(BR)CES}$	I_C = 10mA, V_{BE} = 0	36	–	–	V
Emitter−Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 2.0mA, I_C = 0	4.0	–	–	V
Collector Cutoff Current	I_{CES}	V_{CE} = 15V, V_{BE} = 0, T_C = +55°C	–	–	8.0	mA
	I_{CBO}	V_{CB} = 15V, I_E = 0	–	–	0.5	mA
ON Characteristics						
DC Current Gain	h_{FE}	I_C = 0.5A, V_{CE} = 5.0V	5.0	–	–	
Dynamic Characteristics						
Output Capacitance	C_{ob}	V_{CB} = 15V, I_E = 0, f = 0.1MHz	–	70	85	pF
Functional Test						
Common−Emitter Amplifier Gain	G_{PE}	P_{OUT} = 15W, V_{CC} = 12.5V, f = 175MHz	6.3	–	–	dB
Collector Efficiency	η	P_{OUT} = 15W, V_{CC} = 12.5V, f = 175MHz	60	–	–	%


.725 (18.42)
.122 (3.1) Dia
(2 Holes)
E
C
.250
(6.35)
B
E
.225 (5.72)
.860 (21.84)
.378 (9.56)
.005 (0.15)
.255
(6.5)
.185 (4.7)
.975 (24.77)
.085 (2.14)