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NTE472
Silicon NPN Transistor
RF Power Output
P_O = 1.8W @ 175MHz

Description:

The NTE472 is a silicon NPN transistor designed for amplifier, frequency multiplier or oscillator applications in military, mobile marine and citizens band equipment. Suitable for use as output driver or pre–driver stages in VHF and UHF equipment.

Features:

- Specified 12.5 Volt, 175MHz Characteristics:
  - Output Power = 1.75 Watts
  - Minimum Gain = 11.5dB
  - Efficiency = 50%
- Characterized through 225MHz

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO} 16V
Collector–Base Voltage, V_{CBO} 36V
Emitter–Base Voltage, V_{EBO} 3.5V
Continuous Collector Current, I_C 0.33A
Total Device Dissipation (T_C = +75°C , Note 1), P_D 3.5W
Derate Above 75°C . . . . . 28mW/°C
Storage Temperature Range, T_{stg} . . . . . –65° to +200°C

Note 1. This device is designed for RF operation. The total device dissipation rating applies only when the device is operated as a class B or C RF amplifier.

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 = 25mA, I_B = 0	16	–	–	V
	$V_{(BR)CES}$	I_C = 25mA, V_{BE} = 0	36	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_C = 0.5mA, I_C = 0	3.5	–	–	V
Collector Cutoff Current	I_{CEO}	V_{CE} = 10V, I_B = 0	–	–	0.3	mA

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
ON Characteristics						
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 50mA	20	–	150	
Dynamic Characteristics						
Output Capacitance	C_{ob}	V_{CB} = 12V, I_E = 0, f = 1MHz	–	–	15	pF
Functional Test						
Common–Emitter Amplifier Power Gain	G_{PE}	P_{OUT} = 1.75W, V_{CC} = 12.5V, f = 175MHz	11.5	–	–	dB
Collector Efficiency	η		50	–	–	%