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NTE361
Silicon NPN Transistor
RF Power Output
P_O = 2W @ 512MHz

Description:

The NTE361 is a silicon NPN transistor designed for 12.5 Volt UHF large–signal amplifier applications in industrial and commercial FM equipment operating to 512MHz.

Features:

- Specified 12.5 Volt, 470MHz Characteristics:
  Output Power = 2.0 Watts
  Minimum Gain = 8.0dB
  Efficiency = 50%
- Characterized with Series Equivalent Large–Signal Impedance Parameters
- Grounded Emitter TO39 Package for High Gain and Excellent Heat Dissipation
- Replaces Medium–Power Stud Mounted Devices

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO} 16V
Collector–Base Voltage, V_{CBO} 36V
Emitter–Base Voltage, V_{EBO} 4V
Collector Current–Continuous, I_C 400mA
Total Device Dissipation @ T_C = 25°C, P_D 8W
Derate Above 25°C . . . . . 46mW/°C
Storage Temperature Range, T_{stg} . . . . . –65° to +200°C

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 = 50mA, I_B = 0	16	–	–	V
	$V_{(BR)CES}$	I_C = 50mA, V_{BE} = 0	36	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 1mA, I_C = 0	4	–	–	V
Collector Cutoff Current	I_{CBO}	V_{CB} = 15V, I_E = 0	–	–	1.0	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 = 100mA	20	–	200	
Dynamic Characteristics						
Output Capacitance	C_{ob}	V_{CB} = 12.5V, I_E = 0, f = 1MHz	–	–	15	pF
Functional Test						
Common–Emitter Amplifier Power Gain	G_{PE}	P_{OUT} = 2W, V_{CC} = 12.5V, f = 470MHz	8.0	–	–	dB
Collector Efficiency	η	P_{OUT} = 2W, V_{CC} = 12.5V, f = 470MHz	50	–	–	%