ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089
http://www.nteinc.com

NTE360
Silicon NPN Transistor
RF Power Output
P_O = 40W @ 175MHz

Description:

The NTE360 is designed primarily for wideband large–signal amplifier stages in the 125–175MHz frequency range.

Features:

- Specified 28 Volt, 175MHz Characteristics:
  Output Power = 40 Watts
  Minimum Gain = 7.6dB
  Efficiency = 60%
- Characterized from 125 to 175MHz
- Includes Series Equivalent Impedances

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO} 35V
Collector–Base Voltage, V_{CB} 65V
Emitter–Base Voltage, V_{EB} 4V
Collector Current–Continuous, I_C 5A
Total Device Dissipation (T_C = +25°C), P_D 60W
Derate above 25°C . . . . . 342mW/°C
Operating Junction Temperature Range, T_J . . . . . –65° to +200°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 = 200mA, I_B = 0, Note 1	35	–	–	V
	$V_{(BR)CES}$	I_C = 200mA, V_{BE} = 0, Note 1	65	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10mA, I_C = 0	4	–	–	V
Collector Cutoff Current	I_{CBO}	V_{CB} = 30V, I_E = 0	–	–	1	mA
On Characteristics						
DC Current Gain	h_{FE}	I_C = 500mA, V_{CE} = 5.0V	5.0	–	–	–
Dynamic Characteristics						
Output Capacitance	C_{ob}	V_{CB} = 30V, I_E = 0, f = 0.1 to 1.0MHz	–	45	65	pF

Note 1 Pulsed through 25mH inductor.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Functional Test						
Common–Emitter Amplifier Power Gain	G_{PE}	P_{OUT} = 40 W, V_{CE} = 28 V, f = 175MHz	7.6	8.1	–	dB
Collector Efficiency	η	P_{OUT} = 40 W, V_{CE} = 28 V, f = 175MHz	60	–	–	%