ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE235
Silicon NPN Transistor
Final RF Power Output

Description:

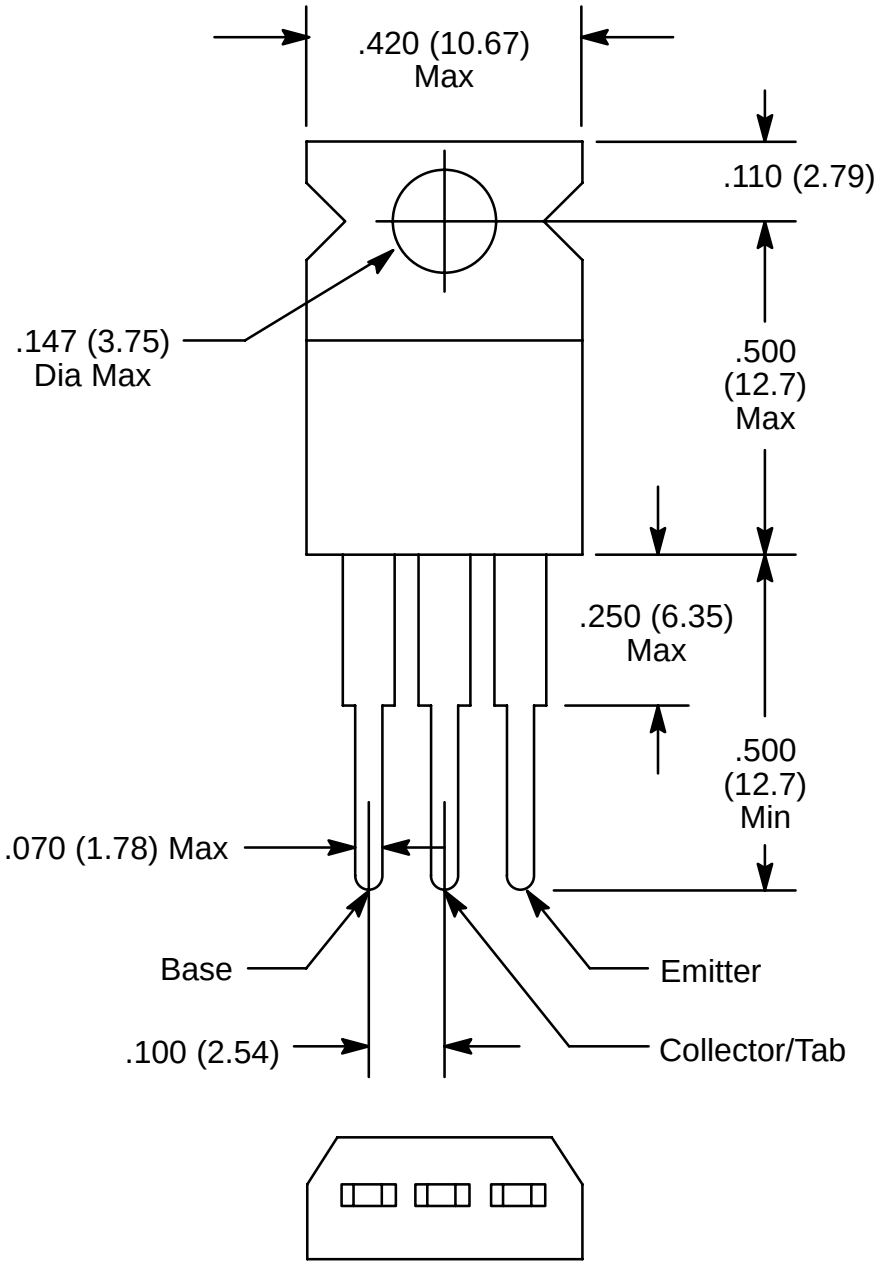
The NTE235 is an NPN silicon transistor in a TO220 type case designed for use in high power output amplifier stages such as citizen band communications equipment.

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Collector–Emitter Voltage (R_{BE} = 150Ω), V_{CER} 75V
Collector–Base Voltage, V_{CBO} 80V
Emitter–Base Voltage, V_{EBO} 5V
Collector Current, I_C
  Continuous 3A
  Peak 5A
Collector Dissipation, P_C
  T_A = +25°C 1.2W
  T_C = +50°C 10W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 100μA, I_B = 0	80	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CER}$	I_C = 1mA, R_{BE} = 150Ω	75	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 100μA, I_C = 0	5	–	–	V
Collector Cutoff Current	I_{CBO}	V_{CB} = 40V, I_E = 0	–	–	10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 4V, I_C = 0	–	–	10	μA
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 500mA	25	–	200	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 1A, I_B = 100mA	–	0.15	0.6	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 1A, I_B = 100mA	–	0.9	1.2	V
Current Gain–Bandwidth Product	f_T	V_{CE} = 10V, I_C = 100mA	100	150	–	MHz
Output Capacitance	C_{ob}	V_{CB} = 10V, f = 1MHz	–	45	60	pF
Power Output	P_O	V_{CC} = 12V, P_{in} = 0.2W, f = 27MHz	4.0	–	–	W
Collector Efficiency	η		60	–	–	%


.420 (10.67)
Max
.110 (2.79)
.147 (3.75)
Dia Max
.500
(12.7)
Max
.250 (6.35)
Max
.500
(12.7)
Min
.070 (1.78) Max
Base
Emitter
.100 (2.54)
Collector/Tab