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

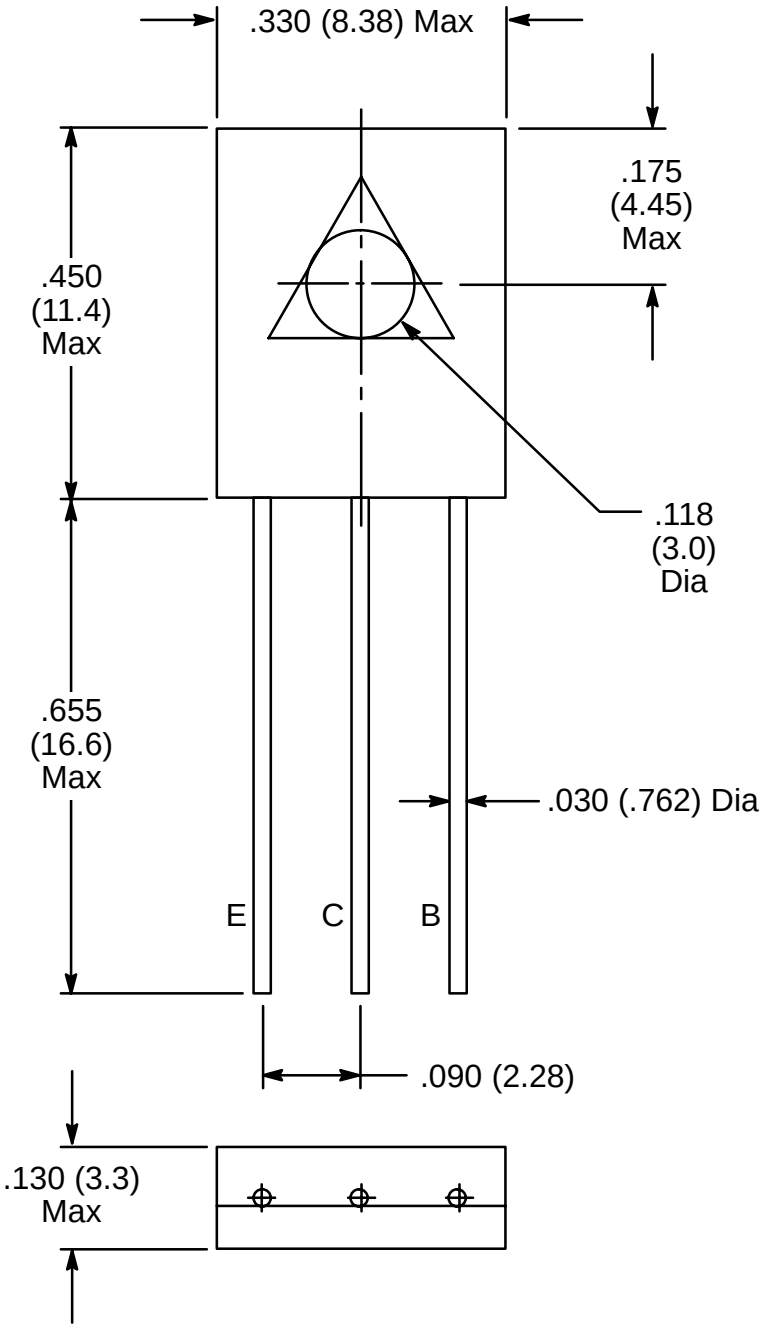
NTE295
Silicon NPN Transistor
RF Power Output, Driver

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

Collector–Base Voltage, V_{CBO} 75V
Collector–Emitter Voltage (R_{BE} = 150Ω), V_{CER} 75V
Collector–Emitter Voltage, V_{CEO} 45V
Emitter–Base Voltage, V_{EBO} 5V
Collector Current, I_C
  Continuous 1.0A
  Peak 1.5A
Collector Dissipation (T_A = +25°C), P_C 750mW
Collector Dissipation (T_C = +25°C), P_C 5W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 40V, I_E = 0	–	–	1.0	µA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 4V, I_C = 0	–	–	1.0	µA
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 10µA, I_E = 0	75	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CER}$	I_C = 1mA, R_{BE} = 150Ω	75	–	–	V
	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	45	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10µA, I_C = 0	5	–	–	V
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 500mA	60	–	320	
Current Gain Bandwidth Product	f_T	V_{CE} = 10V, I_C = 50mA	180	250	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 50mA	–	0.2	0.6	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 500mA, I_B = 50mA	–	0.9	1.2	V
Output Capacitance	C_{ob}	V_{CB} = 10V, f = 1MHz	–	15	25	pF
Output Power	P_O	V_{CC} = 12V, f = 27MHz, P_i = 35mW	1.0	1.8	–	W
Collector Efficiency	η		60	–	–	%


.330 (8.38) Max
.175
(4.45)
Max
.450
(11.4)
Max
.118
(3.0)
Dia
.655
(16.6)
Max
.030 (.762) Dia
E
C
B
.090 (2.28)
.130 (3.3)
Max