ELECTRONICS, INC.
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NTE2347
Silicon NPN Transistor
General Purpose, Medium Power

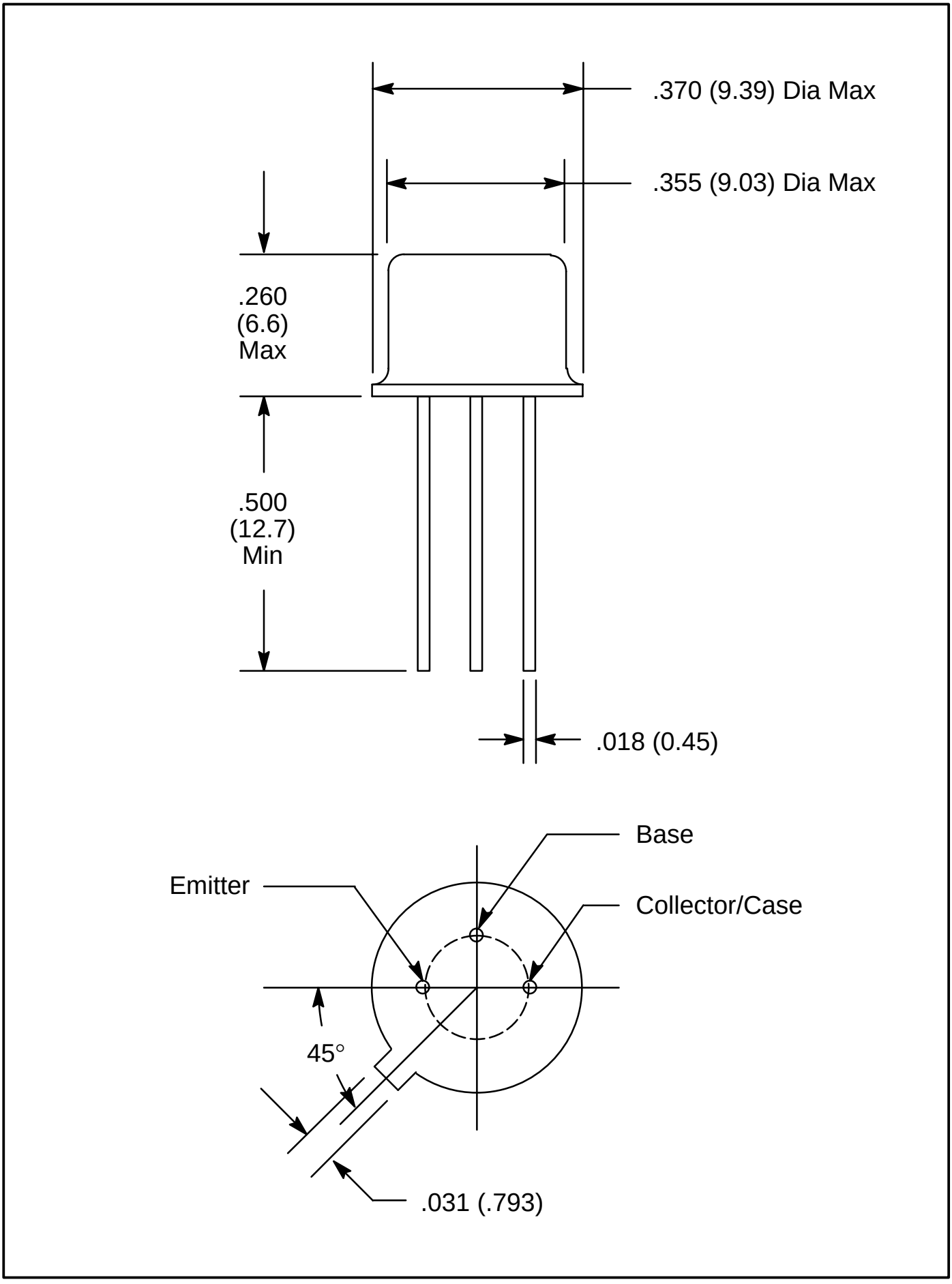
Description:
The NTE2347 is a silicon NPN transistor in a TO39 type package designed for use in high current, fast switching applications and for power amplifiers.

Absolute Maximum Ratings:
Collector–Base Voltage (I_E = 0), V_{CBO} 150V
Collector–Emitter Voltage (I_B = 0), V_{CEO} 80V
Emitter–Base Voltage (I_C = 0), V_{EBO} 6V
Collector Current, I_C 5A
Total Power Dissipation, P_{tot}
$T_A \le +25°C$ 1W
$T_C \le +25°C$ 7W
$T_C \le +100°C$ 4W
Junction Temperature, T_J . . . . . +200°C
Storage Temperature Range, T_{stg} . . . . . –65° to +200°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 25°C/W
Thermal Resistance, Junction–to–Ambient, R_{thJA} . . . . . 175°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CES}	V_{CE} = 150V, V_{BE} = 0	–	–	1	mA
		V_{CE} = 100V, V_{BE} = 0	–	–	1	µA
		V_{CE} = 100V, V_{BE} = 0, T_C = +150°C	–	–	100	µA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 6V, I_C = 0	–	–	1	mA
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C = 50mA, I_B = 0, Note 1	80	–	–	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 5A, I_B = 500mA, Note 1	–	–	1	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 5A, I_B = 500mA, Note 1	–	–	1.6	V
DC Current Gain	h_{FE}	I_C = 2A, V_{CE} = 2V, Note 1	40	–	120	
		I_C = 2A, V_{CE} = 2V, T_C = –55°C, Note 1	15	–	–	
Transition Frequency	f_T	I_C = 500mA, V_{CE} = 5V	50	–	–	MHz
Collector–Base Capacitance	C_{CBO}	V_{CB} = 10V, I_E = 0, f = 1MHz	–	–	80	pF
Turn–On Time	t_{on}	V_{CC} = 20V, I_C = 500mA, I_{B1} = 500mA	–	–	0.35	µs
Storage Time	t_s	V_{CC} = 20V, I_C = 5A, I_{B1} = $-I_{B2}$ = 500mA	–	–	0.35	µs
Fall Time	t_f		–	–	0.3	µs

Note 1. Pulse Test: Pulse Duration = 300µs, Duty Cycle = 1.5%.


.370 (9.39) Dia Max
.355 (9.03) Dia Max
.260
(6.6)
Max
.500
(12.7)
Min
.018 (0.45)
Base
Emitter
Collector/Case
45°
.031 (.793)