ELECTRONICS, INC.
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MMBTA56
Silicon PNP Transistor
General Purpose Amplifier

Absolute Maximum Ratings:

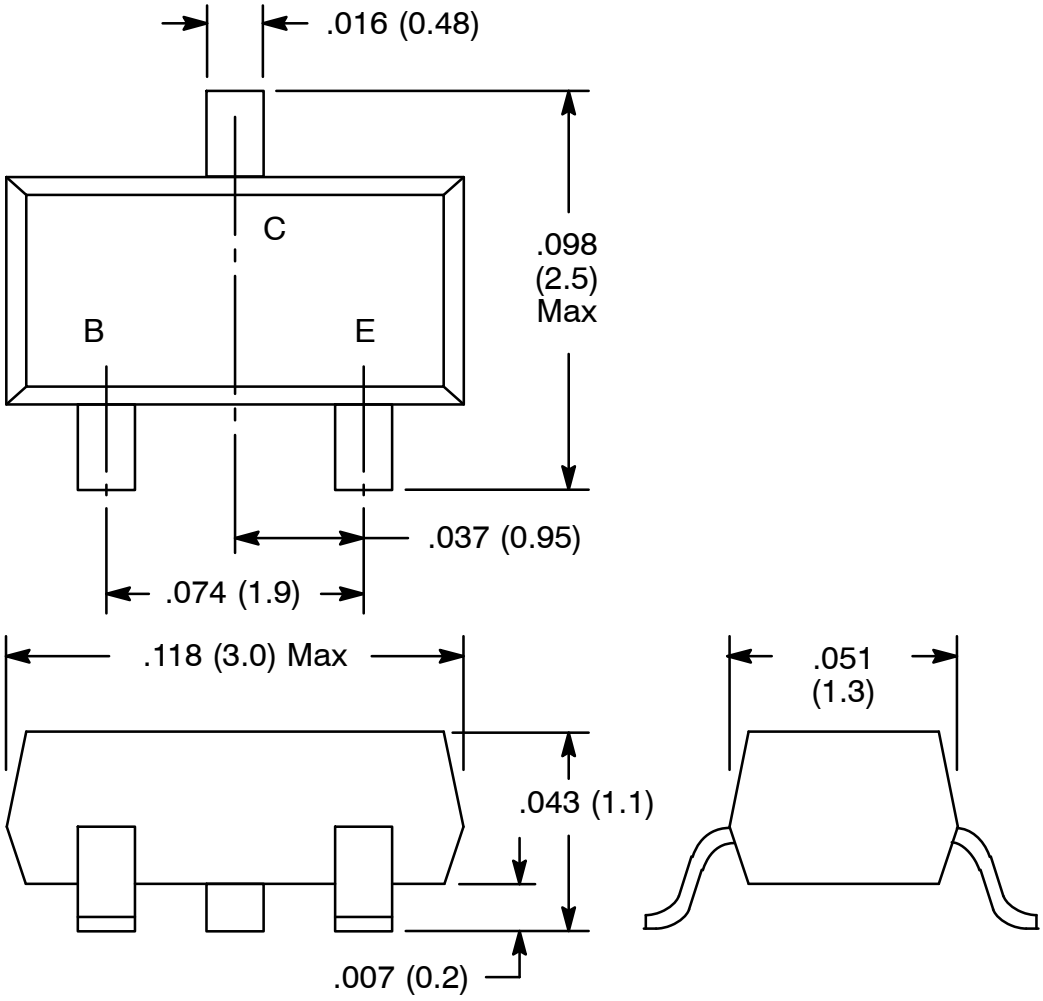
Collector–Emitter Voltage, V_{CES} . . . . . –80V
Collector–Base Voltage, V_{CBO} . . . . . –80V
Emitter–Base Voltage, V_{EBO} . . . . . –4V
Continuous Collector Current, I_C . . . . . –500mA
Total Device Dissipation (T_A = 25°C, Note 1), P_D 350mW
Derate Above 25°C . . . . . 2.8mW/°C
Operating Junction Temperature Range, T_J . . . . . –55° to +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Thermal Resistance, Junction–to–Ambient, R_{thJA} . . . . . 357°C/W

Note 1. Device mounted on FR–4 PCB 1.6” x 1.56” x 0.06”.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = –1.0mA, I_B = 0, Note 1	–80	–	–	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = –100μA, I_E = 0	–80	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = –100μA, I_C = 0	–4.0	–	–	V
Collector Cutoff Current	I_{CEO}	V_{CE} = –60V, I_B = 0	–	–	–0.1	μA
	I_{CBO}	V_{CB} = –80V, I_E = 0	–	–	–0.1	μA
ON Characteristics						
DC Current Gain	h_{FE}	V_{CE} = –1.0V, I_C = –10mA	100	–	–	
		V_{CE} = –1.0V, I_C = –100mA	100	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = –100mA, I_B = –10mA	–	–	–0.2	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = –100mA, V_{CE} = –1.0V	–	–	–1.2	V
Small Signal Characteristics						
Current Gain Bandwidth Product	f_t	I_C = –100mA, V_{CE} = –1.0V, f = 100MHz	50	–	–	MHz

Note 1. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.


.016 (0.48)
C
B
E
.098
(2.5)
Max
.037 (0.95)
.074 (1.9)
.118 (3.0) Max
.051
(1.3)
.043 (1.1)
.007 (0.2)