ELECTRONICS, INC.
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TIP32A, TIP32B, TIP32C
Silicon PNP Transistors
Medium Power Amp, Switch
TO–220 Type Package

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

Collector–Base Voltage, V_{CBO}
- TIP32A 60V
- TIP32B 80V
- TIP32C 100V

Collector–Emitter Voltage, V_{CEO}
- TIP32A 60V
- TIP32B 80V
- TIP32C 100V

Emitter–Base Voltage, V_{EBO} 5V

Continuous Current, I_C
- Continuous 3A
- Pulse 5A

Continuous Base Current, I_B 3A

Power Dissipation, P_D
- T_C = +25°C 40W
- T_A = +25°C 2W

Operating Junction Temperature, T_J . . . . . +150°C

Storage Temperature Range, T_{stg} . . . . . –65° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Sustaining Voltage TIP32A	$V_{CEO(sus)}$	I_C = 30mA, I_B = 0, Note 1	60	–	–	V
TIP32B			80	–	–	V
TIP32C			100	–	–	V
Collector Cutoff Current TIP32A	I_{CEO}	V_{CE} = 30V, I_B = 0	–	–	0.3	mA
TIP32B, TIP32C		V_{CE} = 60V, I_B = 0	–	–	0.3	mA
Collector Cutoff Current TIP32A	I_{CES}	V_{CE} = 60V, V_{EB} = 0	–	–	200	μA
TIP32B		V_{CE} = 80V, V_{EB} = 0	–	–	200	μA
TIP32C		V_{CE} = 100V, V_{EB} = 0	–	–	200	μA

Note 1. Pulsed: Pulse Duration ≤ 300μs, Duty Cycle ≤ 2%.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Emitter Cutoff Current	I_{EBO}	V_{BE} = 5V, I_C = 0	–	–	1.0	mA
DC Current Gain	h_{FE}	V_{CE} = 4V, I_C = 1A, Note 1	25	–	–	
		V_{CE} = 4V, I_C = 3A, Note 1	10	–	50	
Collector−Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 3A, I_B = 375mA, Note 1	–	–	1.2	V
Base−Emitter Saturation Voltage	$V_{BE(sat)}$	V_{CE} = 4V, I_C = 3A, Note 1	–	–	1.8	V
Current Gain Bandwidth Product	f_T	V_{CE} = 10V, I_C = 500mA, f = 1MHz	3	–	–	MHz

Note 1. Pulsed: Pulse Duration ≤ 300μs, Duty Cycle ≤ 2%.