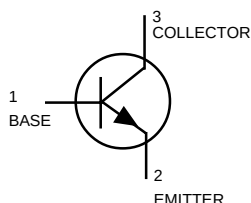


Driver Transistors

NPN Silicon



BSS64LT1



CASE 318-08, STYLE 6
SOT-23 (TO-236AB)

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V_{CEO}	80	Vdc
Collector–Base Voltage	V_{CBO}	120	Vdc
Emitter–Base Voltage	V_{EBO}	5.0	Vdc
Collector Current — Continuous	I_C	100	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 5 Board, (1) $T_A = 25^\circ\text{C}$	P_D	225	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	P_D	300	mW
Derate above 25°C		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	–55 to +150	$^\circ\text{C}$

DEVICE MARKING

BSS64LT1 = AM

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector–Emitter Breakdown Voltage ($I_C = 4.0 \text{ mAdc}$)	$V_{(BR)CEO}$	80	—	Vdc
Collector–Base Breakdown Voltage ($I_C = 100 \mu\text{Adc}$)	$V_{(BR)CBO}$	120	—	Vdc
Emitter–Base Breakdown Voltage ($I_E = 100 \mu\text{Adc}$)	$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current ($V_{CB} = 90 \text{ Vdc}$) ($T_A = 150^\circ\text{C}$)	I_{CBO}	—	0.1 500	nAdc
Emitter Cutoff Current ($V_{EB} = 4.0 \text{ Vdc}$)	I_{EBO}	—	200	nAdc

1. FR–5 = 1.0 x 0.75 x 0.062 in. 2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

Thermal Clad is a trademark of the Bergquist Company.

BSS64LT1

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (Continued)

Characteristic	Symbol	Min	Max	Unit
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ON CHARACTERISTICS

DC Current Gain ($I_C = 10\text{ mAdc}$, $V_{CE} = 1.0\text{ Vdc}$)	h_{FE}	20	—	—
Collector–Emitter Saturation Voltage ($I_C = 4.0\text{ mAdc}$, $I_B = 0.4\text{ mAdc}$) ($I_C = 50\text{ mAdc}$, $I_B = 15\text{ mAdc}$)	$V_{CE(sat)}$	—	0.15 0.2	Vdc
Forward Base–Emitter Voltage	$V_{BE(sat)}$	—	—	—

SMALL–SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product ($I_C = 4.0\text{ mAdc}$, $V_{CE} = 10\text{ Vdc}$, $f = 20\text{ MHz}$)	f_T	60	—	MHz
Output Capacitance ($V_{CB} = 10\text{ Vdc}$, $f = 1.0\text{ MHz}$)	C_{ob}	—	20	pF