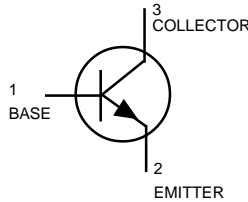
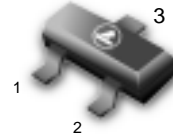


# Driver Transistors

## 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 $25^\circ\text{C}$		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	$P_D$	300	mW
Derate above $25^\circ\text{C}$		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
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