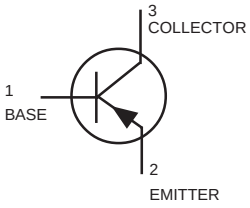
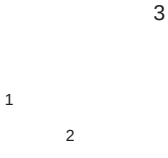
High Voltage Transistors

PNP Silicon

BSS63LT1





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

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector– Emitter Voltage	V_{CEO}	–100	Vdc
Collector– Emitter Voltage (R_{BE} = 10 kΩ)	V_{CER}	–110	Vdc
Collector Current — Continuous	I_C	–100	mAdc

DEVICE MARKING

BSS63LT1 = T1

THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage (I_C = –100 µA)	$V_{(BR)CEO}$	– 100	—	—	Vdc
Collector–Emitter Breakdown Voltage (I_C = –10 µAdc , I_E =0, R_{BE} =10 kΩ)	$V_{(BR)CER}$	– 110	—	—	Vdc
Collector–Base Breakdown Voltage (I_E = – 10 µAdc, I_E =0)	$V_{(BR)CBO}$	– 110	—	—	Vdc
Emitter –Base Breakdown Voltage (I_E = – 10 µA)	$V_{(BR)CBO}$	– 6.0	—	—	Vdc
Collector Cutoff Current (V_{CB} = – 90 Vdc, I_E =0)	I_{CBO}	—	—	– 100	µAdc
Collector Cutoff Current (V_{CB} = – 110 Vdc, R_{BE} =10 kΩ)	I_{CER}	—	—	– 10	µAdc
Emitter Cutoff Current (V_{EB} = – 6.0 Vdc, I_C = 0)	I_{EBO}	—	—	– 200	µAdc

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.

BSS63LT

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.) (Continued)

Characteristic	Symbol	Min	Typ	Max	Unit
ON CHARACTERISTICS					
DC Current Gain	h_{FE}				—
(I_C = –10 mAdc, V_{CE} = –1.0 Vdc)		30	—	—	
(I_C = –25 mAdc, V_{CE} = –1.0 Vdc)		30	—	—	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$				mVdc
(I_C = –25 mAdc, I_B = –2.5 mAdc)		—	—	–250	
Base–Emitter Saturation Voltage	$V_{BE(sat)}$				mVdc
(I_C = –25 mAdc, I_B = –2.5 mAdc)		—	—	–900	
SMALL–SIGNAL CHARACTERISTICS					
Current–Gain — Bandwidth Product	f_T				MHz
(I_C = –25 mAdc, V_{CE} = –5.0 Vdc, f = 20 MHz)		50	95	—	
Case Capacitance	C_C				pF
(I_E = I_C = 0, V_{CB} = –10 Vdc, f = 1.0 MHz)		—	—	20	