BSS80B,C

CASE 318-02/03, STYLE 6
SOT-23 (TO-236AA/AB)

GENERAL PURPOSE TRANSISTOR

PNP SILICON

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MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	40	Vdc
Collector-Base Voltage	V_{CBO}	60	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current — Continuous	I_C	800	mA

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, T_A = 25°C Derate above 25°C	P_D	350 2.8	mW mW/°C
Storage Temperature	T_{stg}	150	°C
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	°C/W

*Package mounted on 99.5% alumina 10 x 8 x 0.6 mm.

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

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (I_C = 10 mA)		$V_{(BR)CEO}$	40	—	Vdc
Collector-Base Breakdown Voltage (I_C = 10 μA)		$V_{(BR)CBO}$	60	—	Vdc
Emitter-Base Breakdown Voltage (I_E = 10 μA)		$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current (V_{CB} = 50 Vdc) (V_{CB} = 50 Vdc, T_A = 150°C)		I_{CBO}	— —	10 10	nA μA
Emitter Cutoff Current (V_{BE} = 3.0 Vdc)		I_{EBO}	—	10	nA
ON CHARACTERISTICS					
DC Current Gain (I_C = 150 mA, V_{CE} = 10 Vdc)	B C	h_{FE}	40 100	120 300	—
Collector-Emitter Saturation Voltage (I_C = 150 mA, I_B = 15 mA) (I_C = 500 mA, I_B = 50 mA)		$V_{CE(sat)}$	— —	0.4 1.6	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product (I_C = 50 mA, V_{CE} = 20 Vdc, f = 100 MHz)		f_T	200	—	MHz
Output Capacitance (V_{CB} = 10 Vdc, f = 1.0 MHz)		C_{obo}	—	8.0	pF
SWITCHING CHARACTERISTICS					
Delay Time	($I_{B1} \approx I_{B2} \approx$ 15 mA, V_{CC} = 30 V, I_C = 150 mA)	t_d	—	10	ns
Rise Time		t_r	—	40	ns
Storage Time	($I_{B1} \approx I_{B2} \approx$ 15 mA, V_{CC} = 30 V, I_C = 150 mA)	t_s	—	80	ns
Fall Time		t_f	—	30	ns

(1) Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.