BCX69

CASE 345-01, STYLE 1
SOT-89

GENERAL PURPOSE TRANSISTOR

PNP SILICON

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	20	V
Collector-Emitter Voltage	V_{CES}	25	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Base Current	I_B	100	mA
Base Current — Maximum	I_{BM}	200	mA
Collector Current — Continuous	I_C	1.0	A
Collector Current — Maximum	I_{CM}	2.0	A

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, T_A = 25°C Derate above 25°C	P_D	1.0 8.0	Watt mW/°C
Storage Temperature	T_{stg}	150	°C
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	125	°C/W

*Package mounted on 99.5% alumina 10 x 12 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)	$V_{(BR)CEO}$	20	—	V
Collector Cutoff Current (V_{CB} = 25 V)	I_{CBO}	—	100	nA
Emitter Cutoff Current (V_{EB} = 5.0 V)	I_{EBO}	—	10	μA
ON CHARACTERISTICS				
DC Current Gain (V_{CE} = 10 V, I_C = 5.0 mA) (V_{CE} = 1.0 V, I_C = 0.5 A) (V_{CE} = 1.0 V, I_C = 1.0 A)	h_{FE}	 50 85 60	 — 375 —	—
Collector-Emitter Saturation Voltage (I_C = 1.0 A, I_B = 100 mA)	$V_{CE(sat)}$	—	0.5	V
Base-Emitter On Voltage (V_{CE} = 10 V, I_C = 5.0 mA) (V_{CE} = 1.0 V, I_C = 1.0 A)	$V_{BE(on)}$	 — —	 0.6 1.0	V
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain — Bandwidth Product (V_{CE} = 5.0 V, I_C = 10 mA, f = 20 MHz)	f_T	65	—	MHz