

BCX68

CASE 345-01, STYLE 1
SOT-89

GENERAL PURPOSE TRANSISTOR

NPN 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 _{θJA}	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 _{dc}
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain — Bandwidth Product (V _{CE} = 5.0 V, I _C = 10 mA, f = 20 MHz)	f _T	65	—	MHz