BCX19,20

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

GENERAL PURPOSE TRANSISTOR

PNP SILICON

MAXIMUM RATINGS

Rating	Symbol	Value		Unit
		BCX19	BCX20	
Collector-Emitter Voltage	V_{CEO}	45	25	Vdc
Collector-Base Voltage	V_{CBO}	50	30	Vdc
Emitter-Base Voltage	V_{EBO}	5.0		Vdc
Collector Current — Continuous	I_C	500		mAdc

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	Typ	Max	Unit
OFF CHARACTERISTICS						
Collector-Emitter Breakdown Voltage ($I_C = 10$ mAdc, $I_B = 0$)	BCX19 BCX20	$V_{(BR)CEO}$	45 25	— —	— —	Vdc
Collector-Emitter Breakdown Voltage ($I_C = 10$ μAdc, $I_C = 0$)	BCX19 BCX20	$V_{(BR)CES}$	50 30	— —	— —	Vdc
Collector Cutoff Current ($V_{CB} = 20$ Vdc, $I_E = 0$) ($V_{CB} = 20$ Vdc, $I_E = 0$, $T_A = 150°C$)		I_{CBO}	— —	— —	100 5.0	nAdc μAdc
Emitter Cutoff Current ($V_{BE} = 5.0$ Vdc, $I_C = 0$)		I_{EBO}	—	—	10	μAdc
ON CHARACTERISTICS						
DC Current Gain ($I_C = 100$ mAdc, $V_{CE} = 1.0$ Vdc) ($I_C = 300$ mAdc, $V_{CE} = 1.0$ Vdc) ($I_C = 500$ mAdc, $V_{CE} = 1.0$ Vdc)		h_{FE}	100 70 40	— — —	600 — —	—
Collector-Emitter Saturation Voltage ($I_C = 500$ mAdc, $I_B = 50$ mAdc)		$V_{CE(sat)}$	—	—	0.62	Vdc
Base-Emitter On Voltage ($I_C = 500$ mAdc, $V_{CE} = 1.0$ Vdc)		$V_{BE(on)}$	—	—	1.2	Vdc