

**BCX70G**

**NPN EPITAXIAL SILICON TRANSISTOR**

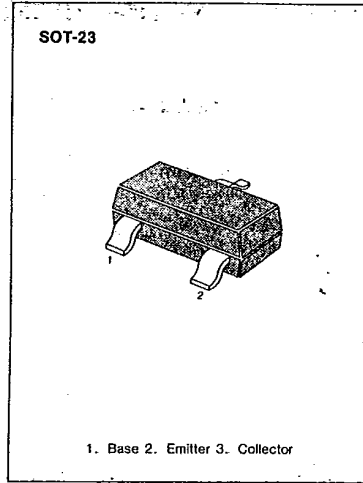
T-29-19

**GENERAL PURPOSE TRANSISTOR**

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub> = 25°C)**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CBO</sub>	45	V
Collector-Emitter Voltage	V <sub>CEO</sub>	45	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	I <sub>C</sub>	200	mA
Collector Dissipation	P <sub>C</sub>	350	mW
Storage Temperature	T <sub>stg</sub>	150	°C

• Refer to MMBT5088 for graphs



**ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25°C)**

Characteristic	Symbol	Test Condition	Min.	Max.	Unit
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> = 2mA, I <sub>B</sub> = 0	45		V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> = 1μA, I <sub>C</sub> = 0	5		V
Collector Cutoff Current	I <sub>CES</sub>	V <sub>CE</sub> = 32V, V <sub>BE</sub> = 0		20	nA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = 4V, I <sub>C</sub> = 0		20	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 2mA	120	220	
		V <sub>CE</sub> = 1V, I <sub>C</sub> = 50mA	60		
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10mA, I <sub>B</sub> = 0.25mA		0.35	V
		I <sub>C</sub> = 50mA, I <sub>B</sub> = 1.25mA		0.55	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 50mA, I <sub>B</sub> = 0.25mA	0.6	0.85	V
		I <sub>C</sub> = 50mA, I <sub>B</sub> = 1.25mA	0.7	1.05	V
Base-Emitter On Voltage	V <sub>BE(on)</sub>	I <sub>C</sub> = 2mA, V <sub>CE</sub> = 5V	0.55	0.75	V
Current Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 10mA	125		MHz
		f = 100MHz			
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0		4.5	pF
		f = 1MHz			
Noise Figure	NF	I <sub>C</sub> = 0.2mA, V <sub>CE</sub> = 5V		6	dB
		f = 1KHz, R <sub>S</sub> = 2KΩ			
Turn On Time	t <sub>on</sub>	I <sub>C</sub> = 10mA, I <sub>B1</sub> = 1mA		150	ns
Turn Off Time	t <sub>off</sub>	I <sub>B2</sub> = 1mA, V <sub>BB</sub> = 3.6V		800	ns
		R <sub>L</sub> = 990Ω, R <sub>1</sub> = R <sub>2</sub> = 5KΩ			

**Marking**

