

**BCX70K**

**NPN EPITAXIAL SILICON TRANSISTOR**

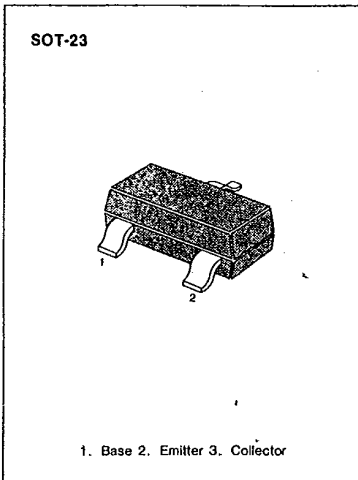
T-29-19

**GENERAL PURPOSE TRANSISTOR**

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	45	V
Collector-Emitter Voltage	V <sub>CE0</sub>	45	V
Emitter-Base Voltage	V <sub>EB0</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 MMBT3904 for graphs



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**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> =2.0mA, I <sub>E</sub> =0	45		V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> =1.0μA, 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> =10μA	100		
		V <sub>CE</sub> =5V, I <sub>C</sub> =2.0mA	380	630	
		V <sub>CE</sub> =1V, I <sub>C</sub> =50mA	100		
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	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</sub> (sat)	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</sub> (on)	I <sub>C</sub> =2.0mA, V <sub>CE</sub> =5V	0.55	0.75	V
Current Gain-Bandwidth Product	f <sub>T</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =5V f=100MHz	125		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0 f=1MHz		4.5	pF
Noise Figure	NF	V <sub>CE</sub> =5V, I <sub>C</sub> =0.2mA R <sub>S</sub> =2KΩ, f=1KHz		6	dB
Turn On Time	t <sub>on</sub>	I <sub>C</sub> =10mA, I <sub>B1</sub> =1.0mA		150	ns
Turn Off Time	t <sub>off</sub>	V <sub>BB</sub> =3.6V, I <sub>B2</sub> =1.0mA R <sub>1</sub> =R <sub>2</sub> =5KΩ, R <sub>L</sub> =990Ω		800	ns

**Marking**

