

BCX70K NPN EPITAXIAL SILICON TRANSISTOR

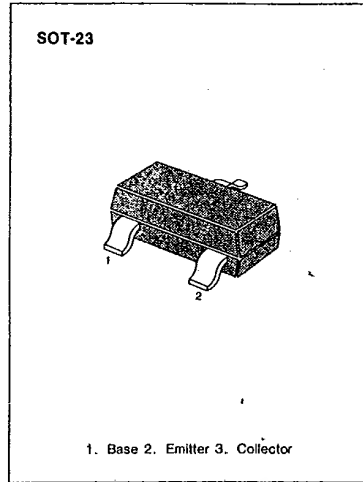
T-29-19

GENERAL PURPOSE TRANSISTOR

ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	45	V
Collector-Emitter Voltage	V _{CE0}	45	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current	I _C	200	mA
Collector Dissipation	P _C	350	mW
Storage Temperature	T _{stg}	150	°C

• Refer to MMBT3904 for graphs



ELECTRICAL CHARACTERISTICS (T_a = 25°C)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C = 2.0mA, I _E = 0	45		V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E = 1.0μA, I _C = 0	5		V
Collector Cutoff Current	I _{CES}	V _{CE} = 32V, V _{BE} = 0		20	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 4V, I _C = 0		20	nA
DC Current Gain	h _{FE}	V _{CE} = 5V, I _C = 10μA	100		
		V _{CE} = 5V, I _C = 2.0mA	380	630	
		V _{CE} = 1V, I _C = 50mA	100		
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C = 10mA, I _B = 0.25mA		0.35	V
		I _C = 50mA, I _B = 1.25mA		0.55	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C = 50mA, I _B = 0.25mA	0.6	0.85	V
		I _C = 50mA, I _B = 1.25mA	0.7	1.05	V
Base-Emitter On Voltage	V _{BE(on)}	I _C = 2.0mA, V _{CE} = 5V	0.55	0.75	V
Current Gain-Bandwidth Product	f _T	I _C = 10mA, V _{CE} = 5V f = 100MHz	125		MHz
Output Capacitance	C _{ob}	V _{CB} = 10V, I _E = 0 f = 1MHz		4.5	pF
Noise Figure	NF	V _{CE} = 5V, I _C = 0.2mA R _S = 2KΩ, f = 1KHz		6	dB
Turn On Time	t _{on}	I _C = 10mA, I _{B1} = 1.0mA		150	ns
Turn Off Time	t _{off}	V _{BB} = 3.6V, I _{B2} = 1.0mA R ₁ = R ₂ = 5KΩ, R _L = 990Ω		800	ns

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Marking

