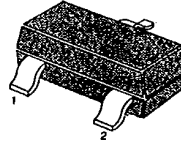


**BCX70H****NPN EPITAXIAL SILICON TRANSISTOR****GENERAL PURPOSE TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

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	$^\circ\text{C}$

• Refer to MMBT3904 for graphs

SOT-23



1. Base 2. Emitter 3. Collector

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )**

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=2.0\text{mA}, I_B=0$	45		V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=1.0\mu\text{A}, I_C=0$	5		V
Collector Cutoff Current	$I_{CES}$	$V_{CE}=32\text{V}, V_{BE}=0$		20	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$		20	nA
DC Current Gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=10\mu\text{A}$	20		
		$V_{CE}=5\text{V}, I_C=2.0\text{mA}$	180	310	
		$V_{CE}=1\text{V}, I_C=50\text{mA}$	70		
Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C=10\text{mA}, I_B=0.25\text{mA}$		0.35	V
		$I_C=50\text{mA}, I_B=1.25\text{mA}$		0.55	V
Base-Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_C=50\text{mA}, I_B=0.25\text{mA}$	0.6	0.85	V
		$I_C=50\text{mA}, I_B=1.25\text{mA}$	0.7	1.05	V
Base-Emitter On Voltage	$V_{BE}(\text{on})$	$I_C=2.0\text{mA}, V_{CE}=5\text{V}$	0.55	0.75	V
Current Gain-Bandwidth Product	$f_T$	$I_C=10\text{mA}, V_{CE}=5\text{V}$ $f=1\text{MHz}$	125		MHz
Output Capacitance	$C_{ob}$	$V_{CE}=10\text{V}, I_E=0$ $f=100\text{MHz}$		4.5	pF
Noise Figure	NF	$V_{CE}=5\text{V}, I_C=0.2\text{mA}$ $R_S=2\text{K}\Omega, f=1\text{KHz}$		6	dB
Turn On Time	$t_{on}$	$I_C=10\text{mA}, I_{B1}=1.0\text{mA}$		150	ns
Turn Off Time	$t_{off}$	$V_{BB}=3.6\text{V}, I_{B2}=1.0\text{mA}$ $R_1=R_2=5\text{K}\Omega, R_L=990\Omega$		800	ns

Marking

