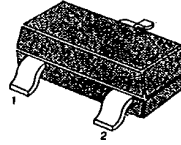


BCX70H**NPN EPITAXIAL SILICON TRANSISTOR****GENERAL PURPOSE TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)**

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}	$V_{CB}=10\text{V}, I_E=0$ $f=100\text{MHz}$		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

