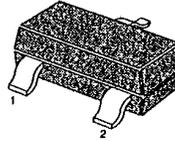


**BCW60A****NPN EPITAXIAL SILICON TRANSISTOR****GENERAL PURPOSE TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	32	V
Collector-Emitter Voltage	$V_{CE0}$	32	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_C$	100	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	$BV_{CE0}$	$I_C = 2.0\text{mA}, I_B = 0$	32		V
Emitter-Base Breakdown Voltage	$BV_{EB0}$	$I_E = 1.0\mu\text{A}, I_C = 0$	5		V
Collector Cutoff Current		$V_{CE} = 32\text{V}, V_{BE} = 0$		20	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$		20	nA
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 2.0\text{mA}$	120	220	
		$V_{CE} = 5\text{V}, I_C = 50\text{mA}$	60		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 1.25\text{mA}$		0.55	V
		$I_C = 10\text{mA}, I_B = 0.25\text{mA}$		0.35	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 50\text{mA}, I_B = 1.25\text{mA}$	0.7	1.05	V
		$I_C = 50\text{mA}, I_B = 0.25\text{mA}$	0.6	0.85	V
Base-Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = 5\text{V}, I_C = 2.0\text{mA}$	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	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0$ $f = 1.0\text{MHz}$		4.5	pF
Noise Figure	NF	$I_C = 0.2\text{mA}, V_{CE} = 5\text{V}$ $R_S = 2\text{K}\Omega, f = 1\text{KHz}$		6	dB
Turn On Time	$t_{on}$	$I_C = 10\text{mA}, I_{B1} = 1\text{mA}$		150	ns
Turn Off Time	$t_{off}$	$V_{BB} = 3.6\text{V}, I_{B2} = 1\text{mA}$ $R_1 = R_2 = 5\text{K}\Omega, R_L = 990\Omega$		800	ns

Marking

