

**BCW71****NPN EPITAXIAL SILICON TRANSISTOR****GENERAL PURPOSE TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

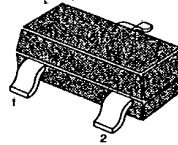
Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	45	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	100	mA
Collector Dissipation	$P_C$	350	mW
Storage Temperature	$T_{stg}$	150	$^\circ\text{C}$

• Refer to MMBT5088 for graphs

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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_C=10\mu\text{A}, I_E=0$	50			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=2\text{mA}, I_B=0$	45			V
Collector-Emitter Breakdown Voltage	$BV_{CES}$	$I_C=2\text{mA}, V_{EB}=0$	45			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector Cutoff Current	$I_{CB0}$	$V_{CB}=20\text{V}, I_E=0$			100	nA
DC Current Gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=2\text{mA}$	110		220	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.25	V
		$I_C=50\text{mA}, I_B=2.5\text{mA}$		0.21		V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=50\text{mA}, I_B=2.5\text{mA}$		0.85		V
Base-Emitter On Voltage	$V_{BE(on)}$	$I_C=2\text{mA}, V_{CE}=5\text{V}$	0.6		0.75	V
Current Gain-Bandwidth Product	$f_T$	$I_C=10\text{mA}, V_{CE}=5\text{V}$ $f=35\text{MHz}$		300		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0$ $f=1\text{MHz}$			4	pF
Noise Figure	NF	$I_C=0.2\text{mA}, V_{CE}=5\text{V}$ $R_S=2\text{K}\Omega, f=1\text{KHz}$			10	dB

SOT-23



1. Base 2. Emitter 3. Collector

Marking

