

BCW33**NPN EPITAXIAL SILICON TRANSISTOR****GENERAL PURPOSE TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)**

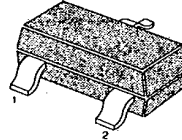
Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	30	V
Collector-Emitter Voltage	V_{CE0}	20	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	100	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	T_{stg}	150	$^\circ\text{C}$

• Refer to MMBT5088 for graphs

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

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = 10\mu\text{A}$, $I_E = 0$	30		V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = 2\text{mA}$, $I_B = 0$	20		V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E = 10\mu\text{A}$, $I_C = 0$	5		V
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}$, $I_C = 2.0\text{mA}$	420	800	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}$, $I_B = 0.5\text{mA}$		0.25	V
Base-Emitter On Voltage	$V_{BE(on)}$	$I_C = 2\text{mA}$, $V_{CE} = 5\text{V}$	0.55	0.7	V
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $I_E = 0$ $f = 1.0\text{MHz}$		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

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Marking

