

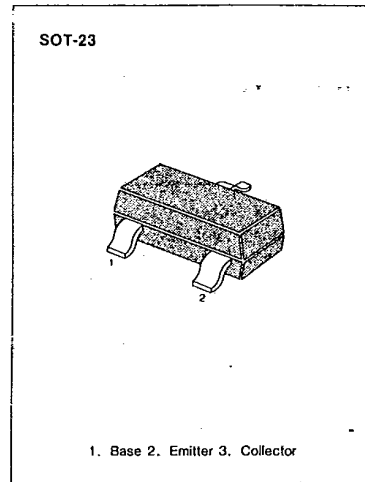
BCW33**NPN EPITAXIAL SILICON TRANSISTOR**

T-29-19

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	20	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	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 10\mu\text{A}, I_E = 0$	30		V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 2\text{mA}, I_B = 0$	20		V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 10\mu\text{A}, I_C = 0$	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

Marking