

BCW72**NPN EPITAXIAL SILICON TRANSISTOR****GENERAL PURPOSE TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)**

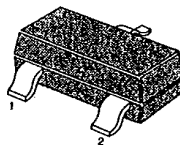
Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	T_{stg}	150	$^\circ\text{C}$

• 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_{CBO}	$I_C=10\mu\text{A}$, $I_E=0$	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_{CBO}	$V_{CB}=20\text{V}$, $I_E=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}$, $I_C=2\text{mA}$	200		450	
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

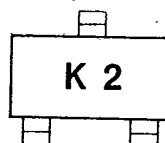
SOT-23



1. Base 2. Emitter 3. Collector

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Marking



SAMSUNG SEMICONDUCTOR