

BCW71

NPN EPITAXIAL SILICON TRANSISTOR

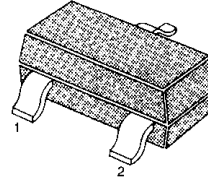
GENERAL PURPOSE TRANSISTOR

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{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 KST2222 for graphs

SOT-23

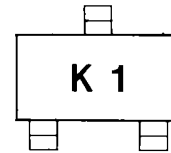


1. Base 2. Emitter 3. Collector

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

Characteristic	Symbol	Test Conditions	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 Cut-off Current	I_{CBO}	$V_{CB}=20\text{V}$, $I_E=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}$, $I_C=2\text{mA}$	110		220	
Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$			0.25	V
		$I_C=50\text{mA}$, $I_B=2.5\text{mA}$		0.21		V
Base-Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_C=50\text{mA}$, $I_B=2.5\text{mA}$				V
Base-Emitter On Voltage	$V_{BE}(\text{on})$	$I_C=2\text{mA}$, $V_{CE}=5\text{V}$	0.6	0.85	0.75	V
Current Gain Bandwidth Product	f_T	$V_{CE}=5\text{V}$, $I_C=10\text{mA}$				MHz
		$f=35\text{MHz}$		300		
Output Capacitance	C_{OB}	$V_{CB}=10\text{V}$, $I_E=0$				pF
		$f=1\text{MHz}$			4	
Noise Figures	NF	$V_{CE}=5\text{V}$, $I_C=2.0\text{mA}$			10	dB
		$R_G=2\text{K}\Omega$, $f=1\text{KHz}$				

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