

# BCW60A/B/C/D

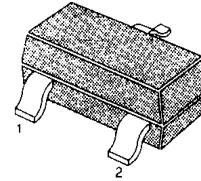
# NPN EPITAXIAL SILICON TRANSISTOR

## GENERAL PURPOSE TRANSISTOR

SOT-23

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CBO</sub>	32	V
Collector-Emitter Voltage	V <sub>CEO</sub>	32	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	I <sub>C</sub>	100	mA
Collector Dissipation	P <sub>C</sub>	350	mW
Storage Temperature	T <sub>STG</sub>	150	°C



1. Base 2. Emitter 3. Collector

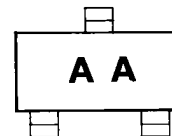
### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =2mA, I <sub>B</sub> =0	32		V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> =1μA, I <sub>C</sub> =0	5		V
Collector Cut-off Current	I <sub>CES</sub>	V <sub>CB</sub> =32V, V <sub>BE</sub> =0		20	nA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0		20	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10μA	20		
			40		
			100		
		V <sub>CE</sub> =5V, I <sub>C</sub> =2mA	120	220	
			180	310	
			250	460	
			380	630	
		V <sub>CE</sub> =1V, I <sub>C</sub> =50mA	60		
			70		
			90		
			100		
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =1.25mA		0.55	V
		I <sub>C</sub> =10mA, I <sub>B</sub> =0.25mA		0.35	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =1.25mA	0.7	1.05	V
		I <sub>C</sub> =10mA, I <sub>B</sub> =0.25mA	0.6	0.85	V
Base-Emitter On Voltage	V <sub>BE(sat)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =2mA	0.55	0.75	V
Output Capacitance	C <sub>OB</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0 f=1MHz		4.5	pF
Current Gain-Bandwidth Product	f <sub>T</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =5V	125		MHz
Noise Figure	NF	I <sub>C</sub> =0.2mA, V <sub>CE</sub> =5V R <sub>G</sub> =2KΩ, f=1KHz		6	dB
Turn On Time	t <sub>ON</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> 1=1mA		150	ns
Turn Off Time	t <sub>OFF</sub>	V <sub>BB</sub> =3.6V, I <sub>B</sub> 2=1mA R1=R2=5KΩ, R <sub>L</sub> =990Ω		800	ns

### MARKING CODE

TYPE	BCW60A	BCW60B	BCW60C	BCW60D
MARK.	AA	AB	AC	AD

### Marking



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