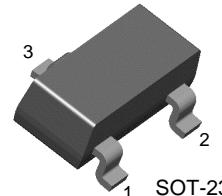


BCW60A/B/C/D

General Purpose Transistor



1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	32	V
V_{CEO}	Collector-Emitter Voltage	32	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	100	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	$^\circ\text{C}$

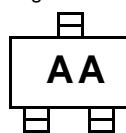
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=2\text{mA}, I_B=0$	32		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=1\mu\text{A}, I_C=0$	5		V
I_{CES}	Collector Cut-off Current	$V_{CE}=32\text{V}, V_{BE}=0$		20	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=4\text{V}, I_C=0$		20	nA
h_{FE}	DC Current Gain : BCW60B : BCW60C : BCW60D : BCW60A : BCW60B : BCW60C : BCW60D : BCW60A : BCW60B : BCW60C : BCW60D	$V_{CE}=5\text{V}, I_C=10\mu\text{A}$ $V_{CE}=5\text{V}, I_C=2\text{mA}$ $V_{CE}=1\text{V}, I_C=50\text{mA}$	20 40 100 120 180 250 380 60 70 90 100	220 310 460 630	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=50\text{mA}, I_B=1.25\text{mA}$ $I_C=10\text{mA}, I_B=0.25\text{mA}$		0.55 0.35	V
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C=50\text{mA}, I_B=1.25\text{mA}$ $I_C=10\text{mA}, I_B=0.25\text{mA}$		0.7 0.6	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=5\text{V}, I_C=2\text{mA}$	0.55	0.75	V
C_{ob}	Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		4.5	pF
f_T	Current Gain Bandwidth Product	$I_C=10\text{mA}, V_{CE}=5\text{V}, f=100\text{MHz}$	125		MHz
NF	Noise Figure	$I_C=0.2\text{mA}, V_{CE}=5\text{V}$ $R_G=2\text{K}\Omega, f=1\text{KHz}$		6	dB
t_{ON}	Turn On Time	$I_C=10\text{mA}, I_{B1}=1\text{mA}$		150	ns
t_{OFF}	Turn Off Time	$V_{BB}=3.6\text{V}, I_{B2}=1\text{mA}$ $R1=R2=5\text{K}\Omega, R_L=990\Omega$		800	ns

Marking Code

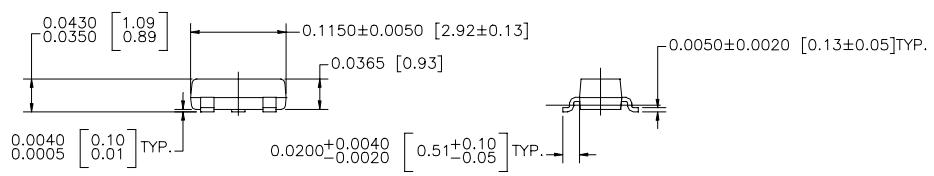
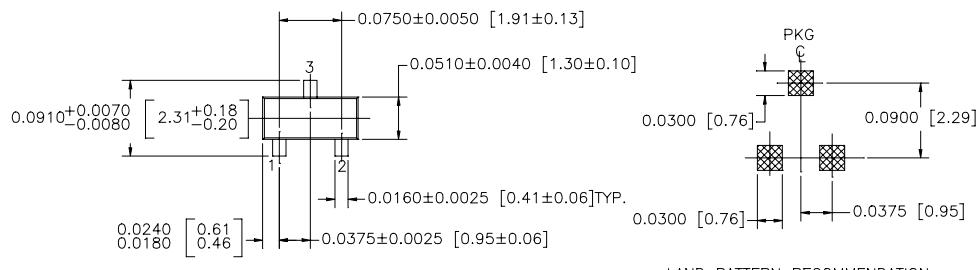
Type	BCW60A	BCW60B	BCW60C	BCW60D
Mark.	AA	AB	AC	AD

Marking



Package Dimensions

SOT-23



SOT 23, 3 LEADS LOW PROFILE

NOTE : UNLESS OTHERWISE SPECIFIED

1. STANDARD LEAD FINISH 150 MICROINCHES / 3.81 MICROMETERS
MINIMUM TIN / LEAD (SOLDER) ON ALLOY 42
2. REFERENCE JEDEC REGISTRATION TO-236, VARIATION AB, ISSUE G, DATED JUL 1993

Dimensions in Millimeters

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CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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