

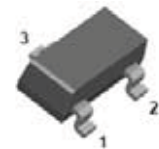
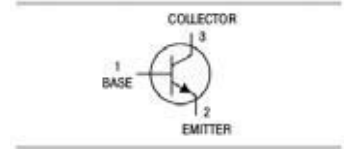
NPN General Purpose Amplifier: BCW71/BCW72

Features:

- Low current(max.100mA)
- Low voltage(max.45V)
- Low noise

Applications:

- General purpose switching and amplification



SOT-23

Ordering Information

Type No.	Marking:	Package Code:
BCW71	K1	SOT-23
BCW73	K2	SOT-23

Maximum Ratings & Characteristics: Tamb=25°C unless otherwise specified

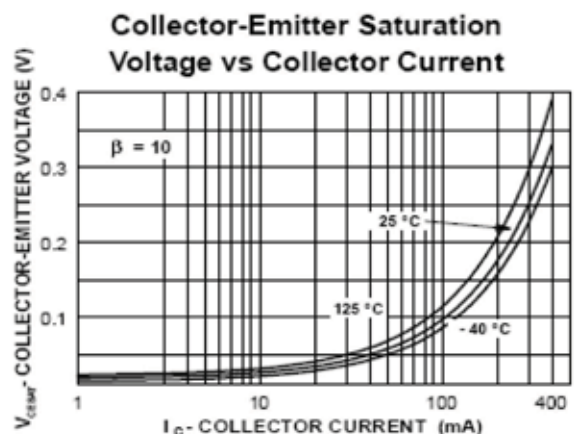
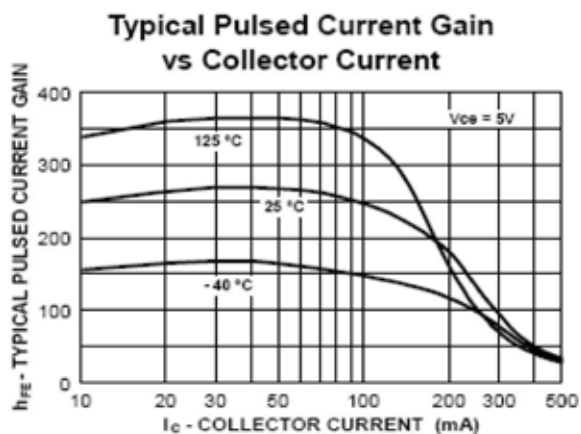
Parameter:	Symbol:	Value:	Unit:
Collector - Base Voltage	V_{CBO}	50	V
Collector - Emitter Voltage	V_{CEO}	45	V
Emitter - Base Voltage	V_{ebo}	5	V
Collector Current Continuous	I_C	100	mA
Collector Current Peak	I_{CM}	200	mA
Base Current Peak	I_{BM}	200	mA
Total Power Dissipation	P_D	250	mW
Thermal resistance from junction to ambient	$R_{th ja}$	500	K/W
Junction and Storage Temperature	T_j, T_{stg}	-65 to +150	°C

Maximum Ratings & Characteristics: $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified

Parameter:	Symbol:	Test Conditions:	Min:	Typ:	Max:	Unit:
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	50			V
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1.0\text{mA}, I_B=0$	45			V
Emmitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			100	nA
DC Current Gain	BCW71 BCW72 BCW71 BCW72	h_{FE} $V_{CE}=5\text{V}, I_C=10\mu\text{A}$ $V_{CE}=5\text{V}, I_C=2\text{mA}$		90 150	220 450	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$ $I_C=50\text{mA}, I_B=2.5\text{mA}$		0.12 0.21	0.25	V V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$ $I_C=50\text{mA}, I_B=2.5\text{mA}$		0.75 0.85		V V
Base Emitter Voltage	V_{BE}	$I_C=2\text{mA}, V_{CE}=5\text{V}$	0.55		0.7	V
Collector Capacitance	C_C	$I_E=I_e=0, V_{CB}=10\text{V}, f=1\text{MHz}$		2.5		pF
Transition Frequency	f_T	$V_{CE}=5\text{V}, I_C=10\text{mA}$ $f=100\text{MHz}$	100			MHz
Noise Figure	NF	$V_{CE}=5\text{V}, I_C=200\mu\text{A}, R_S=2\text{k}\Omega$ $f=1\text{kHz}, B=200\text{Hz}$			10	dB

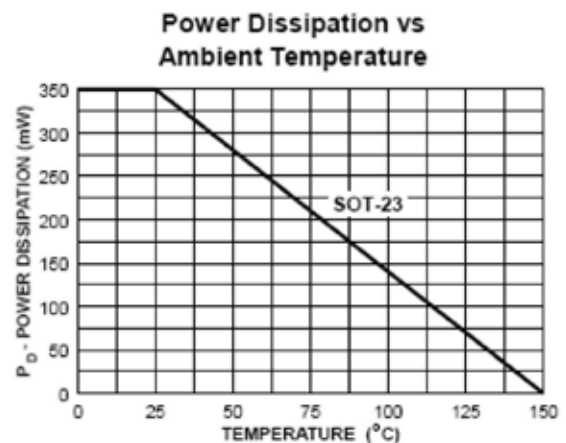
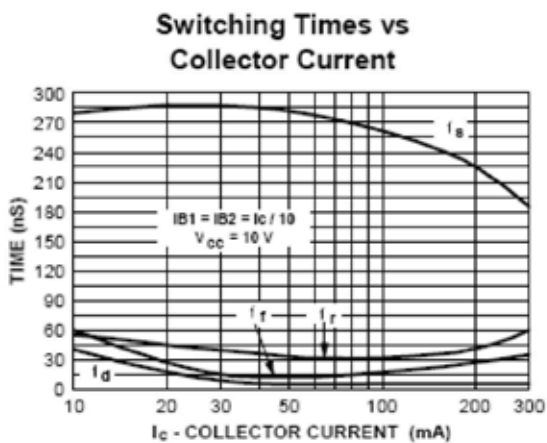
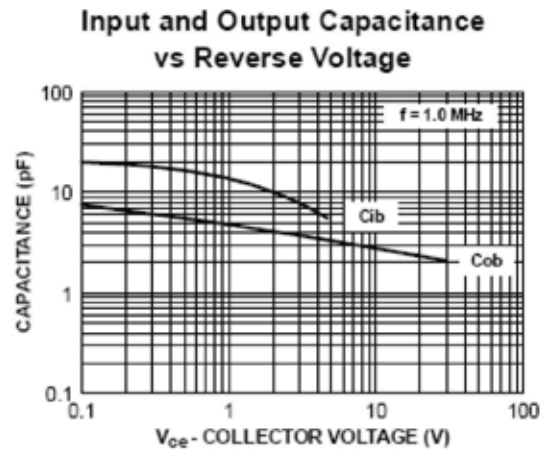
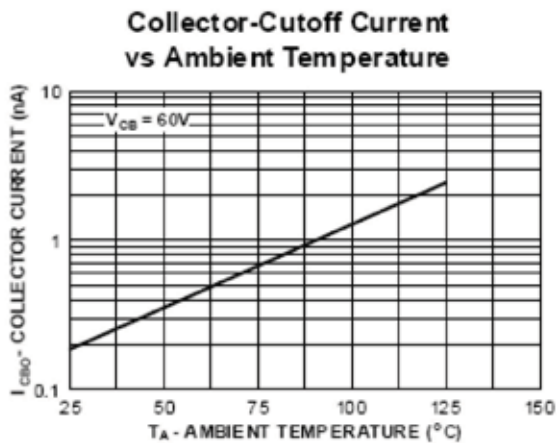
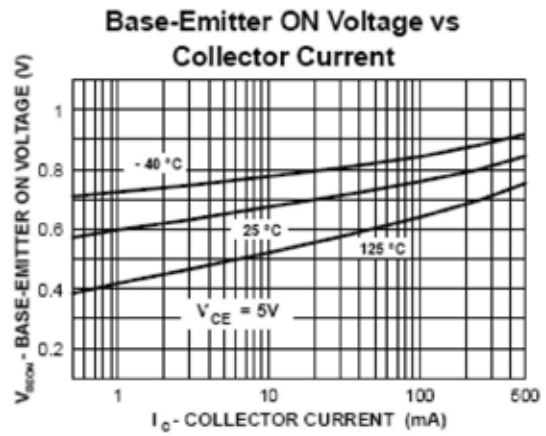
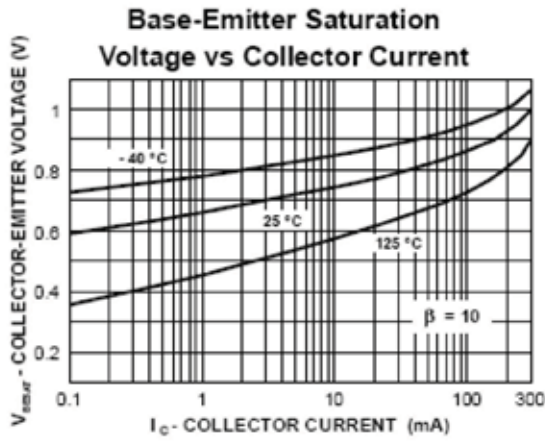
Typical Characteristics: $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified

Ratings & Characteristic Curves



Typical Characteristics: $T_{amb}=25^{\circ}C$ unless otherwise specified

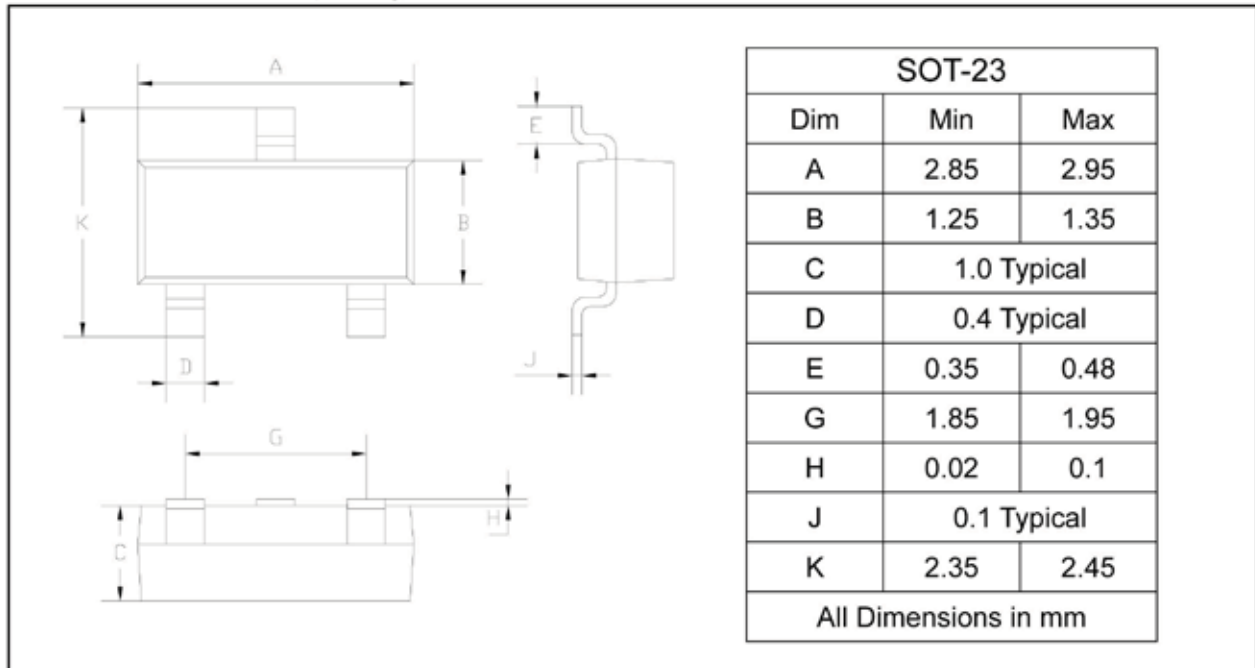
Ratings & Characteristic Curves



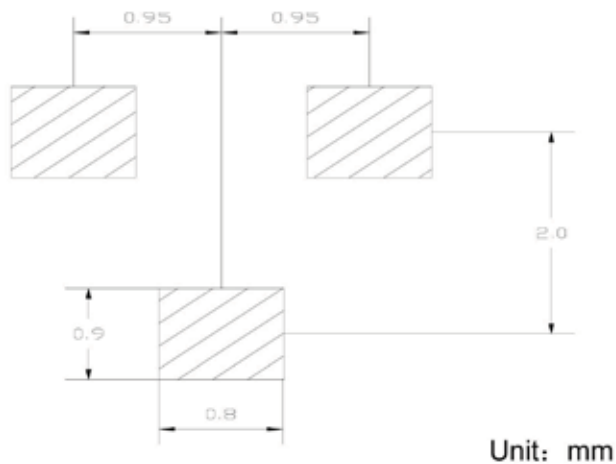
Package Outline

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BCW71/72	SOT-23	3000/Tape&Reel