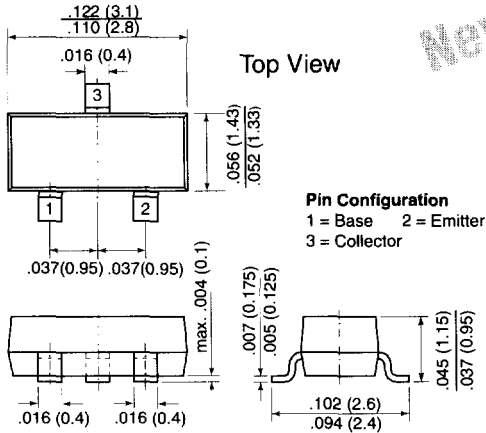


BCW71 and BCW72

Small Signal Transistor (NPN)



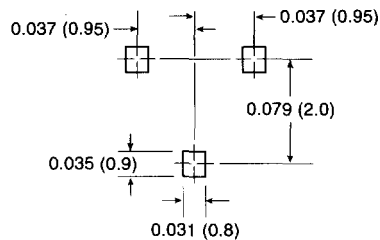
TO-236AB (SOT-23)



Dimensions in inches and (millimeters)

New Product

Mounting Pad Layout



Features

- NPN Silicon Epitaxial Planar Transistors
- Suited for low level, general purpose applications.
- Low current, low voltage.
- As complementary types, BCW69 and BCW70 PNP transistors are recommended.

Mechanical Data

Case: SOT-23 Plastic Package

Weight: approx. 0.008g

Marking Code: BCW71 = K1
 BCW72 = K2

Packaging Codes/Options:

E8/10K per 13" reel (8mm tape), 30K/box
 E9/3K per 7" reel (8mm tape), 30K/box

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CE0}	45	V
Emitter-Base Voltage	V _{EB0}	5.0	V
Collector Current	I _c	100	mA
Peak Collector Current	I _{CM}	200	mA
Peak Base Current	I _{BM}	200	mA
Power Dissipation	P _{tot}	250	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	500 ⁽¹⁾	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _s	-65 to +150	°C

Note: (1) Mounted on FR-4 printed-circuit board.

BCW71 and BCW72

Small Signal Transistor (NPN)

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
DC Current Gain	BCW71	V _{CE} = 5 V, I _C = 10 μA	—	90	—	—
	BCW72		—	150	—	
	BCW71	V _{CE} = 5 V, I _C = 2 mA	110	—	220	
	BCW72		200	—	450	
Collector-Emitter Saturation Voltage	V _{CEsat}	I _C = 10 mA, I _B = 0.5 mA I _C = 50 mA, I _B = 2.5 mA	— —	120 210	250 —	mV
Base-Emitter Saturation Voltage	V _{BEsat}	I _C = 10 mA, I _B = 0.5 mA I _C = 50 mA, I _B = 2.5 mA	— —	750 850	— —	mV
Base-Emitter Voltage	V _{BE}	V _{CE} = 5 V, I _C = 2 mA	550	—	700	mV
Collector Cut-off Current	I _{CBO}	V _{CB} = 20 V, V _{BE} = 0	—	—	100	nA
		V _{CB} = 20 V, V _{BE} = 0, T _A = 100°C	—	—	10	μA
Gain-Bandwidth Product	f _T	V _{CE} = 5 V, I _C = 10 mA f = 100 MHz	100	—	—	MHz
Collector-Base Capacitance	C _{CB0}	V _{CB} = 10 V, f = 1 MHz, I _E = 0	—	2.5	—	pF
Noise Figure	F	V _{CE} = 5 V, I _C = 200 μA, R _S = 2 kΩ, f = 1 kHz, B = 200 Hz	—	—	10	dB