



New Product

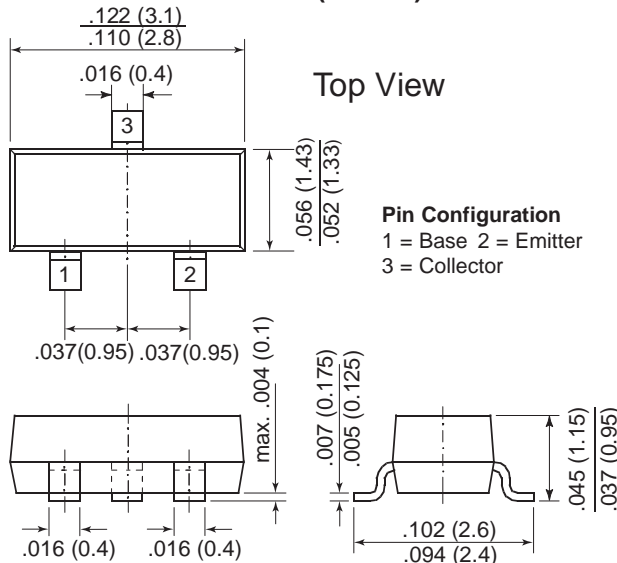
BCW69 and BCW70

Vishay Semiconductors
formerly General Semiconductor

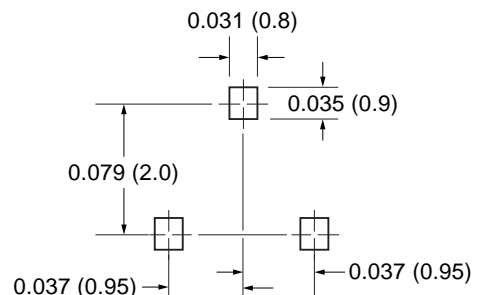
Small Signal Transistor (PNP)



TO-236AB (SOT-23)



Mounting Pad Layout



Features

- PNP Silicon Epitaxial Planar Transistors
- Suited for low level, general purpose applications.
- Low current, low voltage.
- As complementary types, BCW71 and BCW72 NPN transistors are recommended.

Mechanical Data

Case: SOT-23 Plastic Package

Weight: approx. 0.008g

Marking Code: BCW69 = H1
BCW70 = H2

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	$-V_{CBO}$	50	V
Collector-Emitter Voltage	$-V_{CEO}$	45	V
Emitter-Base Voltage	$-V_{EBO}$	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	$R_{\theta JA}$	500 ⁽¹⁾	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

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

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
DC Current Gain	h _{FE}	—	—	90	—	—
		—	—	150	—	
		—V _{CE} = 5 V, -I _C = 10 μA	—	—	—	
		—V _{CE} = 5 V, -I _C = 2 mA	120	—	260	
			215	—	500	
Collector-Emitter Saturation Voltage	-V _{CEsat}	-I _C = 10 mA, -I _B = 0.5 mA -I _C = 50 mA, -I _B = 2.5 mA	— —	80 150	300 —	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	— —	720 810	— —	mV
Base-Emitter Voltage	-V _{BE}	-V _{CE} = 5 V, -I _C = 2 mA	600	—	750	mV
Collector Cut-off Current	-I _{CBO}	-V _{CB} = 20 V, V _{EB} = 0	—	—	100	nA
		-V _{CB} = 20 V, V _{EB} = 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	—	4.5	—	pF
Noise Figure	F	-V _{CE} = 5 V, -I _C = 200 μA, R _S = 2 kΩ, f = 100 kHz, B = 200 Hz	—	2	6	dB