

SOT-23 Formed SMD Package

BCW67, A, B, C
BCW68, F, G, H

GENERAL PURPOSE TRANSISTOR

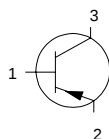
P-N-P transistor

Marking

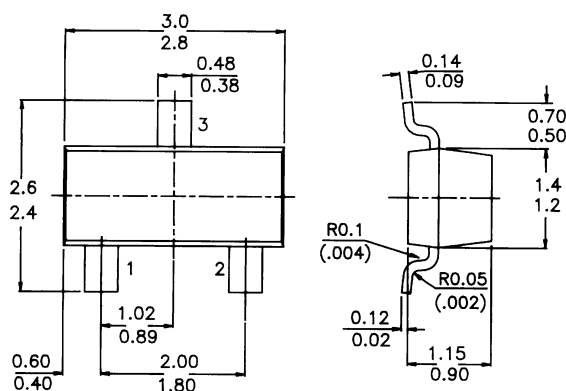
BCW67A = DA
BCW67B = DB
BCW67C = DC
BCW68F = DF
BCW68G = DG
BCW68H = DH

Pin configuration

1 = BASE
2 = EMITTER
3 = COLLECTOR



PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm



ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter) $-V_{CBO}$
Collector-emitter voltage (open base) $-V_{CEO}$
Emitter-base voltage (open collector) $-V_{EBO}$
Collector current (d.c.) $-I_C$
Total power dissipation at $T_{amb} = 25^\circ\text{C}$ P_{tot}
D.C. current gain

$I_C = 10 \text{ mA}; V_{CE} = 1 \text{ V}$

BCW67A, 68F

BCW67B, 68G

BCW67C, 68H

$I_C = 100 \text{ mA}; V_{CE} = 1 \text{ V}$

BCW67A, 68F

BCW67B, 68G

	BCW 67series	68 series
$-V_{CBO}$	max. 45	60 V
$-V_{CEO}$	max. 32	45 V
$-V_{EBO}$	max. 5	V
$-I_C$	max. 800	mA
P_{tot}	max 225	mW
h_{FE}	min. 75	
h_{FE}	min. 120	
h_{FE}	min. 180	
h_{FE}	min. 100	
h_{FE}	max. 250	
h_{FE}	min. 160	
h_{FE}	max. 400	

BCW67, A, B, C
BCW68, F, G, H

BCW67C, 68H	h_{FE}	min.	250
		max.	630
$I_C = 300 \text{ mA}; V_{CE} = 1 \text{ V}$			
BCW67A, 68F	h_{FE}	min.	35
BCW67B, 68G	h_{FE}	min.	60
BCW67C, 68H	h_{FE}	min.	100

RATINGS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

Collector-base voltage (open emitter)	$-V_{CBO}$	max.	45	60	V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	32	45	V
Emitter-base voltage (open collector)	$-V_{EBO}$	max.	5		V
Collector current (d.c.)	$-I_C$	max.	800		mA
Total power dissipation at $T_{amb} = 25^\circ\text{C}$	P_{tot}	max	225		mW
Storage temperature	T_{stg}		-55 to +150		$^\circ\text{C}$

THERMAL CHARACTERISTICS

$$T_j = P (R_{th\ j-t} + R_{th\ s-a}) + T_{amb}$$

Thermal resistance

from junction to ambient	$R_{th\ j-a}$	556	556	556	$^\circ\text{C/mW}$
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CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Collector-emitter breakdown voltage			BCW67 series	68 series
$I_C = 10 \text{ mA}; I_B = 0$	$V_{(BR)CEO}$	min.	32	45 V
$I_C = 10 \text{ mA}; V_{EB} = 0$	$V_{(BR)CES}$	min.	45	60 V
Emitter-base breakdown voltage				
$I_E = 10 \text{ mA}; I_C = 0$	$V_{(BR)EBO}$	min.	5	V
Collector cut-off current				
$V_{CE} = 32 \text{ V}; I_E = 0 \text{ V}$	I_{CES}	max.	20	– nA
$V_{CE} = 45 \text{ V}; I_E = 0 \text{ V}$	I_{CES}	max.	–	20 nA
$V_{CE} = 32 \text{ V}; I_E = 0 \text{ V}; T_A = 150^\circ\text{C}$	I_{CES}	max.	10	– mA
$V_{CE} = 45 \text{ V}; I_E = 0 \text{ V}; T_A = 150^\circ\text{C}$	I_{CES}	max.	–	10 mA
Emitter cut-off current				
$V_{EB} = 4 \text{ V}; I_C = 0$	I_{EBO}	max.	20	nA
Output capacitance at $f = 1 \text{ MHz}$				
$I_E = 0; V_{CB} = 10 \text{ V}$	C_c	max.	18	pF
Input capacitance at $f = 1 \text{ MHz}$				
$I_C = 0; V_{EB} = 0.5 \text{ V}$	C_e	max.	105	pF
Saturation voltages				
$I_C = 300 \text{ mA}; I_B = 30 \text{ mA}$	V_{CEsat}	max.	1.5	V
$I_C = 500 \text{ mA}; I_B = 50 \text{ mA}$	$-V_{BEsat}$	max.	2	V
Noise figure at $R_S = 1 \text{ kW}$				
$I_C = 0.2 \text{ mA}; V_{CE} = 5 \text{ V}$				
$f = 1 \text{ KHz}, BW = 200 \text{ Hz}$	NF	max.	10	dB
Transition frequency at $f = 100 \text{ MHz}$				
$I_C = 20 \text{ mA}; V_{CE} = 10 \text{ V}$	f_T	min.	100	MHz

Disclaimer

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