

GENERAL PURPOSE TRANSISTOR

P-N-P transistor

Marking

BCW67A = DA

BCW67B = DB

BCW67C = DC

BCW68F = DF

BCW68G = DG

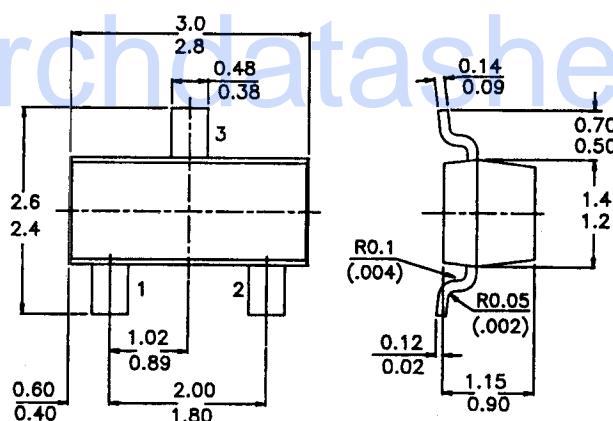
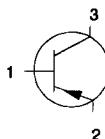
BCW68H = DH

PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm**Pin configuration**

1 = BASE

2 = Emitter

3 = COLLECTOR

**ABSOLUTE MAXIMUM RATINGS**

	BCW 67series	68 series
Collector-base voltage (open emitter)	-V _{CBO} max.	45 V
Collector-emitter voltage (open base)	-V _{CEO} max.	32 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°C	P _{tot} max	225 mW
D.C. current gain		

I_C = 10 mA; V_{CE} = 1 V

BCW67A, 68F	h _{FE}	min.	75
BCW67B, 68G	h _{FE}	min.	120
BCW67C, 68H	h _{FE}	min.	180

I_C = 100 mA; V_{CE} = 1 V

BCW67A, 68F	h _{FE}	min.	100
		max.	250
BCW67B, 68G	h _{FE}	min.	160
		max.	400

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	°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	°C/mW
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CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)**Collector-emitter breakdown voltage** $I_C = 10 \text{ mA}; I_B = 0$ $I_C = 10 \mu\text{A}; V_{EB} = 0$ **Emitter-base breakdown voltage** $I_E = 10 \mu\text{A}; I_C = 0$ **Collector cut-off current** $V_{CE} = 32 \text{ V}; I_E = 0 \text{ V}$ $V_{CE} = 45 \text{ V}; I_E = 0 \text{ V}$ $V_{CE} = 32 \text{ V}; I_E = 0 \text{ V}; T_A = 150^\circ\text{C}$ $V_{CE} = 45 \text{ V}; I_E = 0 \text{ V}; T_A = 150^\circ\text{C}$ **Emitter cut-off current** $V_{EB} = 4 \text{ V}; I_C = 0$ **Output capacitance at $f = 1 \text{ MHz}$** $I_E = 0; V_{CB} = 10 \text{ V}$ **Input capacitance at $f = 1 \text{ MHz}$** $I_C = 0; V_{EB} = 0.5 \text{ V}$ **Saturation voltages** $I_C = 300 \text{ mA}; I_B = 30 \text{ mA}$ $I_C = 500 \text{ mA}; I_B = 50 \text{ mA}$ **Noise figure at $R_S = 1 \text{ k}\Omega$** $I_C = 0.2 \text{ mA}; V_{CE} = 5 \text{ V}$ $f = 1 \text{ KHz}, \text{BW} = 200 \text{ Hz}$ **Transition frequency at $f = 100 \text{ MHz}$** $I_C = 20 \text{ mA}; V_{CE} = 10 \text{ V}$

		BCW67 series		68 series	
$V_{(BR)CEO}$	min.	32		45	V
$V_{(BR)CES}$	min.	45		60	V

$V_{(BR)EBO}$	min.	5			V
I_{CES}	max.	20		-	nA
I_{CES}	max.	-		20	nA
I_{CES}	max.	10		-	μA
I_{CES}	max.	-		10	μA

I_{EBO}	max.	20			nA
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C_c	max.	18			pF
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C_e	max.	105			pF
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V_{CEsat}	max.	1.5			V
$-V_{BEsat}$	max.	2			V

NF	max.	10			dB
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f_T	min.	100			MHz
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