SOT-23 Formed SMD Package

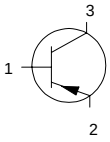
BCW67, A, B, C
BCW68, F, G, H

GENERAL PURPOSE TRANSISTOR

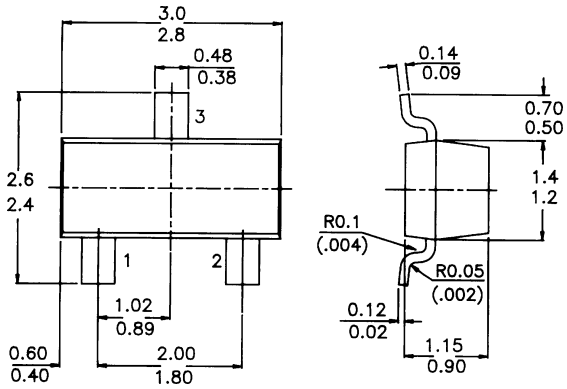
P–N–P transistor

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		***BCW 67series***		***68 series***	
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°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.* *max.*	*100* *250*		
BCW67B, 68G	h_{FE}	*min.* *max.*	*160* *400*		

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

RATINGS *(at T_A = 25°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°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

CHARACTERISTICS *(at T_A = 25°C unless otherwise specified)*

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

Notes

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/ CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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