BCW68GLT1G

General Purpose Transistor

PNP Silicon

Features

• These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-EmitterVoltage	V _{CEO}	-45	Vdc
Collector-Base Voltage	V _{CBO}	-60	Vdc
Emitter-Base Voltage	V _{EBO}	-5.0	Vdc
Collector Current - Continuous	Ic	-800	mAdc

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

THERMAL CHARACTERISTICS

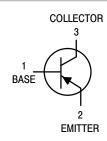
Characteristic	Symbol	Max	Unit		
Total Device Dissipation FR-5 Board (Note 1) T _A = 25°C	P _D	225	mW		
Derate above 25°C		1.8	mW/°C		
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	556	°C/W		
Total Device Dissipation Alumina Substrate (Note 2) $T_{\Delta} = 25^{\circ}C$	P _D	300	mW		
Derate above 25°C		2.4	mW/°C		
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	417	°C/W		
Junction and Storage Temperature	T _J , T _{stg}	-55 to +150	°C		

- 1. FR-5 = $1.0 \times 0.75 \times 0.062$ in.
- 2. Alumina = $0.4 \times 0.3 \times 0.024$ in 99.5% alumina.



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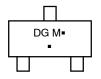
http://onsemi.com





SOT-23 CASE 318 STYLE 6

MARKING DIAGRAM



DG = Specific Device Code

M = Date Code*
= Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation and/or overbar may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping [†]
BCW68GLT1G	SOT-23 (Pb-Free)	3000 / Tape & Reel
BCW68GLT3G	SOT-23 (Pb-Free)	10000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

BCW68GLT1G

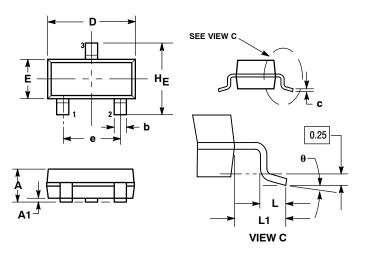
ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C unless otherwise noted)

Characteristic	Symbol	Min	Тур	Max	Unit
OFF CHARACTERISTICS			•		I.
Collector-Emitter Breakdown Voltage (I _C = -10 mAdc, I _B = 0)	V _{(BR)CEO}	-45	-	_	Vdc
Collector–Emitter Breakdown Voltage (I _C = -10 μAdc, V _{EB} = 0)	V _{(BR)CES}	-60	-	_	Vdc
Emitter–Base Breakdown Voltage ($I_E = -10 \mu Adc$, $I_C = 0$)	V _{(BR)EBO}	-5.0	-	-	Vdc
Collector Cutoff Current $(V_{CE}=-45\ Vdc,\ I_E=0)$ $(V_{CE}=-45\ Vdc,\ I_B=0,\ T_A=150^{\circ}C)$	I _{CES}	_ _	- -	-20 -10	nAdc μAdc
Emitter Cutoff Current (V _{EB} = -4.0 Vdc, I _C = 0)	I _{EBO}	_	-	-20	nAdc
ON CHARACTERISTICS					•
DC Current Gain $ \begin{aligned} &(I_C = -10 \text{ mAdc, } V_{CE} = -1.0 \text{ Vdc)} \\ &(I_C = -100 \text{ mAdc, } V_{CE} = -1.0 \text{ Vdc)} \\ &(I_C = -300 \text{ mAdc, } V_{CE} = -1.0 \text{ Vdc)} \end{aligned} $	h _{FE}	120 160 60	- - -	400 - -	-
Collector–Emitter Saturation Voltage (I _C = -300 mAdc, I _B = -30 mAdc)	V _{CE(sat)}	-	-	-1.5	Vdc
Base-Emitter Saturation Voltage (I _C = -500 mAdc, I _B = -50 mAdc)	V _{BE(sat)}	_	-	-2.0	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Current–Gain – Bandwidth Product $(I_C = -20 \text{ mAdc}, V_{CE} = -10 \text{ Vdc}, f = 100 \text{ MHz})$	f _T	100	_	_	MHz
Output Capacitance (V _{CB} = -10 Vdc, I _E = 0, f = 1.0 MHz)	C _{obo}	-	-	18	pF
Input Capacitance $(V_{EB} = -0.5 \text{ Vdc}, I_C = 0, f = 1.0 \text{ MHz})$	C _{ibo}	-	_	105	pF
Noise Figure (I _C = -0.2 mAdc, V _{CE} = -5.0 Vdc, R _S = 1.0 k Ω , f = 1.0 kHz, BW = 200 Hz)	N _F	-	-	10	dB

BCW68GLT1G

PACKAGE DIMENSIONS

SOT-23 (TO-236) CASE 318-08 **ISSUE AN**



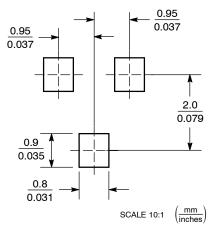
- 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- T14.3M, 1982.
 CONTROLLING DIMENSION: INCH.
 MAXIMUM LEAD THICKNESS INCLUDES LEAD
 FINISH THICKNESS. MINIMUM LEAD
 THICKNESS IS THE MINIMUM THICKNESS OF
- BASE MATERIAL. 318-01 THRU -07 AND -09 OBSOLETE, NEW STANDARD 318-08.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
Α	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
С	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
е	1.78	1.90	2.04	0.070	0.075	0.081
L	0.10	0.20	0.30	0.004	800.0	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104

STYLE 6: PIN 1. BASE

EMITTER COLLECTOR 3

SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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