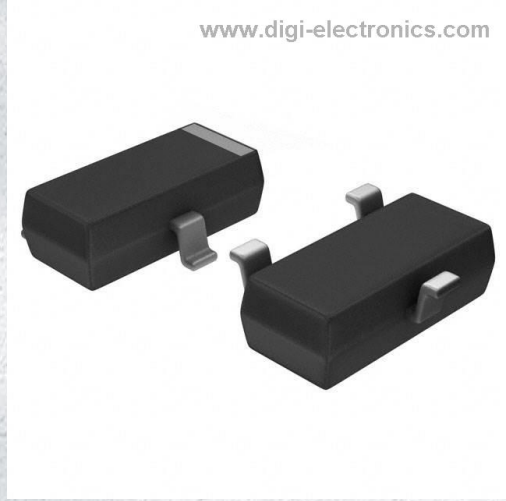
BCW66G_D87Z Datasheet



DiGi Electronics Part Number	BCW66G_D87Z-DG
Manufacturer	onsemi
Manufacturer Product Number	BCW66G_D87Z
Description	TRANS NPN 45V 1A SOT23-3
Detailed Description	Bipolar (BJT) Transistor NPN 45 V 1 A 100MHz 350 m W Surface Mount SOT-23-3

https://www.DiGi-Electronics.com

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
BCW66G_D87Z	onsemi
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
NPN	1 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
45 V	700mV @ 50mA, 500mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
20nA	160 @ 100mA, 1V
Power - Max:	Frequency - Transition:
350 mW	100MHz
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
TO-236-3, SC-59, SOT-23-3	SOT-23-3
Base Product Number:	
BCW66	

Environmental & Export classification

Moisture Sensitivity Level (MSL):	REACH Status:
1 (Unlimited)	REACH Unaffected
ECCN:	HTSUS:
EAR99	8541.21.0075

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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD
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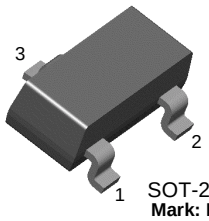
BCW66G

NPN General Purpose Amplifier

- This device is designed for general purpose amplifier applications at collector currents to 500mA.
- Sourced from process 13.



SOT-23
Mark: EG

1. Base 2. Emitter 3. Collector

Absolute Maximum Ratings * T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	45	V
V_{CBO}	Collector-Base Voltage	75	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current - Continuous	1	A
T_J, T_{STG}	Operating and Storage Junction Temperature Range	- 55 ~ +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1. These ratings are based on a maximum junction temperature of 150degrees C.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Electrical Characteristics T_C=25°C unless otherwise noted

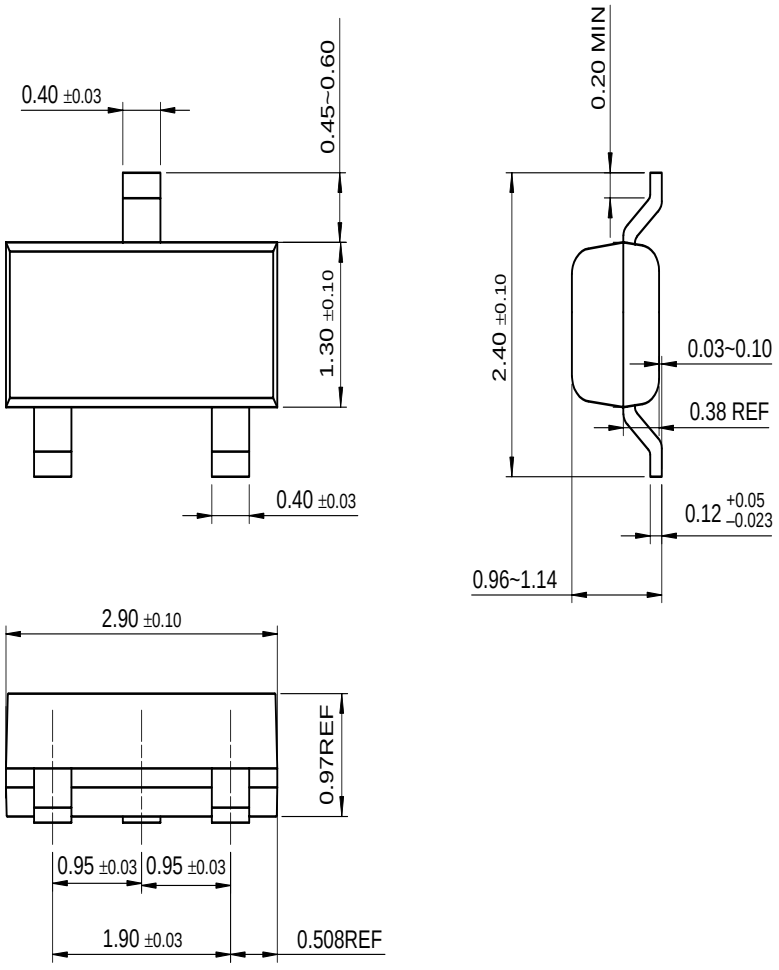
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = 10μA	75			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10mA	45			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 10μA	5			V
I_{CES}	Collector Cut-off Current	V_{CB} = 45V, I_E = 0			20	nA
		V_{CB} = 45V, I_E = 0 T_A = 150°C			20	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 4V			20	nA
h_{FE}	DC Current Gain	V_{CE} = 10V, I_C = 100μA V_{CE} = 1V, I_C = 10mA V_{CE} = 1V, I_C = 100mA V_{CE} = 2V, I_C = 500mA	50 110 160 60		 400 	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 100mA, I_B = 10mA I_C = 500mA, I_B = 50mA			0.3 0.7	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 500mA, I_B = 50mA			2	V
C_{obo}	Output Capacitance	V_{CB} = 10V, f = 1MHz			12	pF
C_{ibo}	Input Capacitance	V_{EB} = 0.5V, f = 1MHz			80	pF
f_T	Current gain Bandwidth Product	V_{CE} = 10V, I_C = 20mA, f = 100MHz	100			MHz
NF	Noise Figure	V_{CE} = 5V, I_C = 0.2mA, R_S = 1kΩ, f = 1KHz, BW = 200Hz			10	dB
t_{on}	Turn-On Time	I_{B1} = I_{B2} = 15mA I_C = 150mA, R_L = 150Ω			100	ns
t_{off}	Turn-Off Time				400	

Thermal Characteristics

Symbol	Parameter	Min.	Typ.	Max.	Units
P_D	Total Device Dissipation Derate above 25°C			350 2.8	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient			357	°C/W

Package Dimensions

SOT-23



Dimensions in Millimeters

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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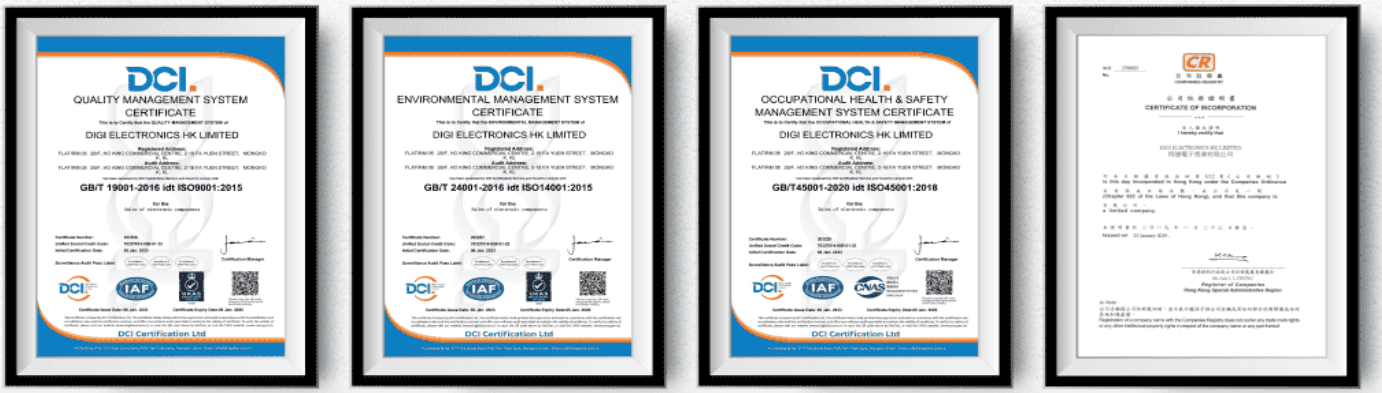

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