

SOT-23 Formed SMD Package

BC807
BC808

SILICON PLANAR EPITAXIAL TRANSISTORS

P-N-P transistor

Marking

BC807 = 5D

BC807-16 = 5A

BC807-25 = 5B

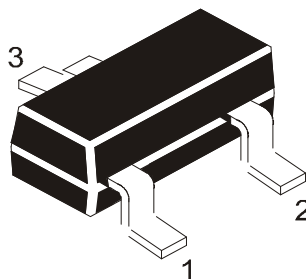
BC807-40 = 5C

BC808 = 5H

BC808-16 = 5E

BC808-25 = 5F

BC808-40 = 5G

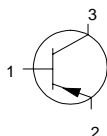


Pin configuration

1 = BASE

2 = EMITTER

3 = COLLECTOR



ABSOLUTE MAXIMUM RATINGS

Collector-emitter voltage ($V_{BE} = 0$)

Collector-emitter voltage (open base)

Collector current (peak value)

Total power dissipation up to $T_{amb} = 25^\circ\text{C}$

Junction temperature

Transition frequency at $f = 100\text{ MHz}$

$-I_C = 10\text{ mA}$; $-V_{CE} = 5\text{ V}$

		BC807	BC808
$-V_{CES}$	max.	50	30 V
$-V_{CE0}$	max.	45	25 V
$-I_{CM}$	max.	1000	mA
P_{tot}	max.	250	mW
T_j	max.	150	$^\circ\text{C}$
f_T	>	80	MHz

BC807 BC808

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

Limiting values

		BC807	BC808
Collector-emitter voltage ($V_{BE} = 0$)	$-V_{CES}$ max.	50	30 V
Collector-emitter voltage (open base)	$-V_{CE0}$ max.	45	25 V
$-I_C = 10$ mA	$-V_{EB0}$ max.	5	5 V
Emitter-base voltage (open collector)			
Collector current (DC)	$-I_C$ max.	500	mA
Collector current (peak value)	$-I_{CM}$ max.	1000	mA
Emitter current (peak value)	I_{EM} max.	1000	mA
Base current (DC)	$-I_B$ max.	100	mA
Base current (peak value)	$-I_{BM}$ max.	200	mA
Total power dissipation at $T_{amb} = 25^\circ\text{C}$ *	P_{tot} max.	250	mW
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
Junction temperature	T_j max.	150	$^\circ\text{C}$

THERMAL RESISTANCE*

From junction to ambient	$R_{th\ j-a}$ =	500	K/W
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CHARACTERISTICS

$T_j = 25^\circ\text{C}$ unless otherwise specified

Collector cut-off current

$I_E = 0$; $-V_{CB} = 20\text{V}$; $T_j = 25^\circ\text{C}$	$-I_{CB0}$ max.	100 nA
$I_E = 0$; $-V_{CB} = 20\text{V}$; $T_j = 150^\circ\text{C}$	$-I_{CB0}$ max.	5 μA

Emitter cut-off current

$I_C = 0$; $V_{EB} = 5$ V	$-I_{EB0}$ max.	10 μA
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Base emitter voltage *

$-I_C = 500$ mA; $-V_{CE} = 1$ V	$-V_{BE}$ max.	1,2 V
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Saturation voltage

$-I_C = 500$ mA; $-I_B = 50$ mA	$-V_{CEsat}$ max.	700 mV
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D.C. current gain

$-I_C = 500$ mA; $-V_{CE} = 1$ V	h_{FE} min.	40
$-I_C = 100$ mA; $-V_{CE} = 1$ V; BC807; BC808	h_{FE}	100 to 600

BC807-16

h_{FE}	100 to 250
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BC808-16

BC807-25

h_{FE}	160 to 400
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BC808-25

BC807-40

h_{FE}	250 to 600
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BC808-40

Transition frequency at $f = 100$ MHz

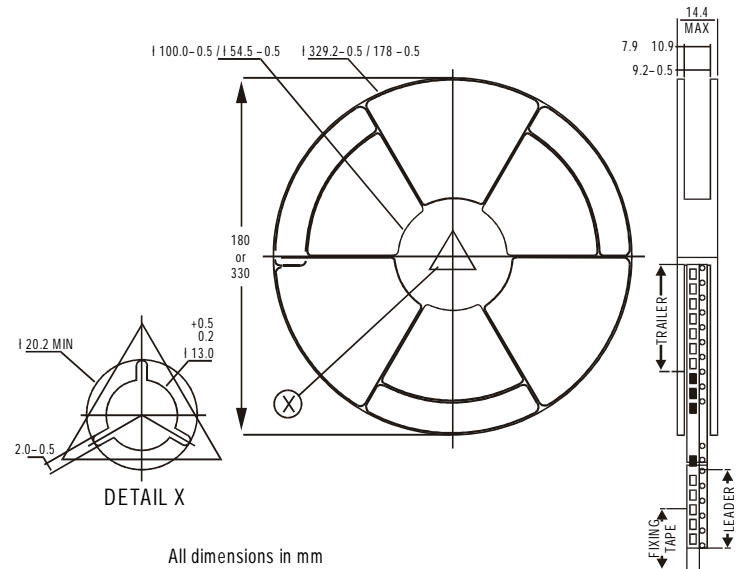
$-I_C = 10$ mA; $-V_{CE} = 5$ V	f_T	> 80 MHz
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Collector capacitance at $f = 1$ MHz

$I_E = I_e = 0$; $-V_{CB} = 10$ V	C_c typ.	8 pF
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SOT-23 Package Reel Information

Reel specifications for Packing (13"/7" reels)



8mm Tape
Size of Reel
180 mm (7")
3,000 Pcs

- ## Tape Specification for SOT-23 Surface Mount Device



Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
SOT-23 T&R	3K/reel	136 gm/3K pcs	3" x 7.5" x 7.5"	12.0K	17" x 15" x 13.5"	192.0K	12 kgs
			9" x 9" x 9"	51.0K	19" x 19" x 19"	408.0K	28 kgs
	10K/reel	415 gm/10K pcs	13" x 13" x 0.5"	10.0K	17" x 15" x 13.5"	300.0K	16 kgs

Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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 are 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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