

BC307
BC308
BC309

PNP SILICON TRANSISTOR



TO-92 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BC307, BC308, and BC309 types are PNP Silicon Transistors manufactured by the epitaxial planar process, designed for general purpose amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Emitter Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	BC307	BC308	BC309	UNITS
V_{CES}	50	30	30	V
V_{CEO}	45	25	25	V
V_{EBO}		5.0		V
I_C		100		mA
P_D		500		mW
T_J, T_{stg}		-65 to +150		$^\circ\text{C}$
θ_{JA}		250		$^\circ\text{C/W}$

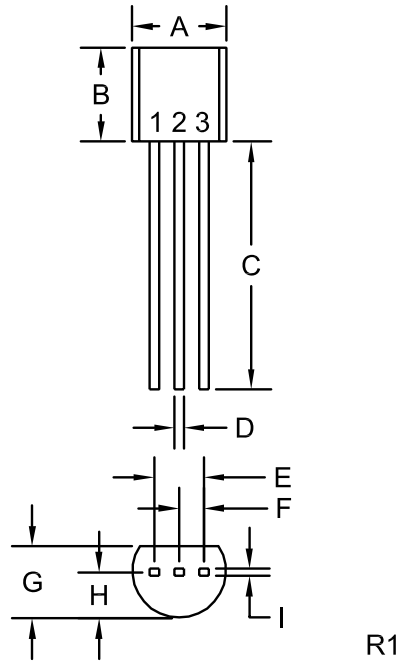
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CES}	$V_{CE}=45\text{V}$ (BC307)			15	nA
I_{CES}	$V_{CE}=25\text{V}$ (BC308, BC309)			15	nA
BV_{CES}	$I_C=10\mu\text{A}$ (BC307)	50			V
BV_{CES}	$I_C=10\mu\text{A}$ (BC308, BC309)	30			V
BV_{CEO}	$I_C=2.0\text{mA}$ (BC307)	45			V
BV_{CEO}	$I_C=2.0\text{mA}$ (BC308, BC309)	25			V
BV_{EBO}	$I_E=10\mu\text{A}$	5			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.3	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	0.55		0.7	V
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			6	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		12		pF
f_T	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=50\text{MHz}$		130		MHz
NF	$V_{CE}=5.0\text{V}, I_C=0.2\text{mA}$ (BC307, BC308) $R_G=2\text{K}\Omega, f=1\text{KHz}$			10	dB
NF	$V_{CE}=5.0\text{V}, I_C=0.2\text{mA}$ (BC309) $R_G=2\text{K}\Omega, f=30\text{Hz}-15\text{KHz}$			4	dB

		BC307A		BC307B		BC307C	
		MIN	MAX	MIN	MAX	MIN	MAX
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	120	220	180	460	380	800

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TO-92 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:
1) COLLECTOR
2) BASE
3) EMITTER

MARKING: FULL PART NUMBER

R0 (2-October 2008)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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