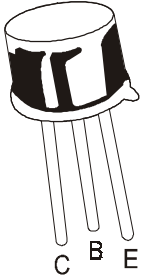


**NPN EPITAXIAL PLANAR SILICON TRANSISTORS**

**BC300, BC301, BC302**



**TO-39  
Metal Can Package**

**NPN SILICON LOW -AND- MEDIUM POWER TRANSISTORS.**

**ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless specified otherwise)**

DESCRIPTION	SYMBOL	BC300 BC301		BC302	UNITS
Collector Emitter Voltage	$V_{CEO}$	80	60	45	V
Collector Base Voltage	$V_{CBO}$	120	90	60	V
Emitter Base Voltage	$V_{EBO}$	7.0	7.0	7.0	V
Collector Current	$I_C$			500	mA
Power Dissipation @ Ta=25°C	$P_D$			850	mW
Junction Temperature	$T_j$			175	°C
Storage Temperature Range	$T_{stg}$			-65 to +200	°C

**ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)**

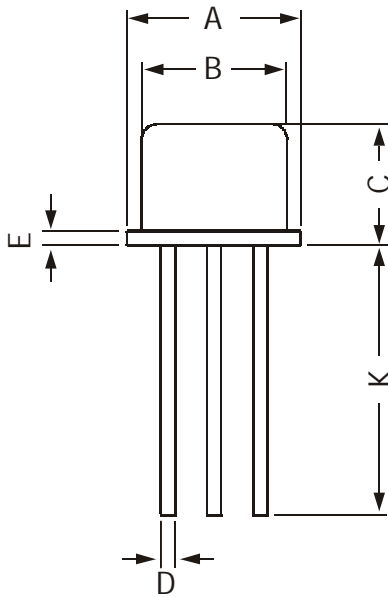
DESCRIPTION	SYMBOL	TEST CONDITION	BC300 BC301 BC302				UNITS		
			BC300		BC301			BC302	
			MIN	MAX	MIN	MAX		MIN	MAX
Collector Cut off Current	$I_{CBO}$	$V_{CB}=120V, I_E=0$	20				nA		
		$V_{CB}=90V, I_E=0$			20		nA		
		$V_{CB}=60V, I_E=0$				20		nA	
DC Current Gain	$h_{FE}$	$I_C=150mA, V_{CE}=10V$							
BC300/301/302			40	240					
BC300/301/302-4			40	80					
BC300/301/302-5		$I_C=150mA, V_{CE}=10V$	70	140					
BC300/301/302-6		$I_C=150mA, V_{CE}=10V$	120	240					
Collector Emitter Sat Voltage	$V_{CE(Sat)}$	$I_C=150mA, I_B=15mA$	ALL	0.5			V		

**DYNAMIC CHARACTERISTICS**

Transition Frequency	$f_T$	$V_{CE}=10V, I_C=50mA,$ $f=20MHz$	100	400		MHz
	ALL					

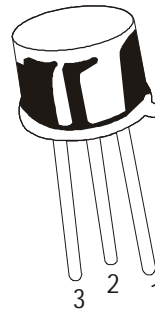
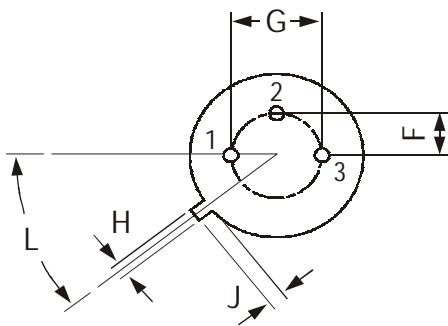
**TO-39**  
**Metal Can Package**

**TO-39 Metal Can Package**



All dimensions are in mm

DIM	MIN	MAX
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	—	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	—
L	42 DEG	48 DEG



**PIN CONFIGURATION**

- 1. EMITTER
- 2. BASE
- 3. COLLECTOR

**Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-39	500 pcs/polybag	540 gm/500 pcs	3" x 7.5" x 7.5"	20K	17" x 15" x 13.5"	32K	40 kgs

### **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 in the Data Sheet and 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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