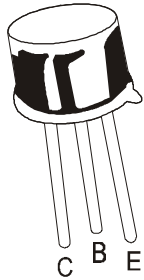


NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

BD115



**TO-39
Metal Can Package**

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

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Emitter Voltage	V_{CEO}	180	V
Collector Emitter Voltage ($R_{BE} \leq 1K\Omega$)	V_{CER}	245	V
Collector Base Voltage	V_{CBO}	245	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current Continuous	I_C	150	mA
Peak	I_{CM}	200	mA
Power Dissipation @ Ta=50°C	P_D	6	W
Storage Temperature	T_j, T_{stg}	-55 to +200	°C
THERMAL RESISTANCE			
Junction to Ambient	$R_{th(j-a)}$	25	°C/W

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

DESCRIPTION	SYMBOL	TEST CONDITION	VALUE			UNITS
			MIN	TYP	MAX	
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA, I_B=0$	180			V
Collector Base Breakdown Current	BV_{CBO}	$I_C=100\mu A, I_E=0$	245			V
Emitter Base Breakdown Voltage	B_{VEBO}	$I_E=100\mu A, I_C=0$	5			V
Collector Cutoff Current	I_{CBO}	$V_{CB}=200V, I_E=0$			15	nA
		$V_{CB}=200V, I_E=0, T_j=200^\circ C$		550		μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5V, I_C=0$			100	μA
Collector Emitter Saturation Voltage	$V_{CE(Sat)}^*$	$I_C=100mA, I_B=10mA$			3.5	V
Base Emitter On Voltage	$V_{BE(on)}^*$	$I_C=50mA, V_{CE}=100V$			1.0	V
DC Current Gain	h_{FE}	$I_C=50mA, V_{CE}=100V$	22	60		

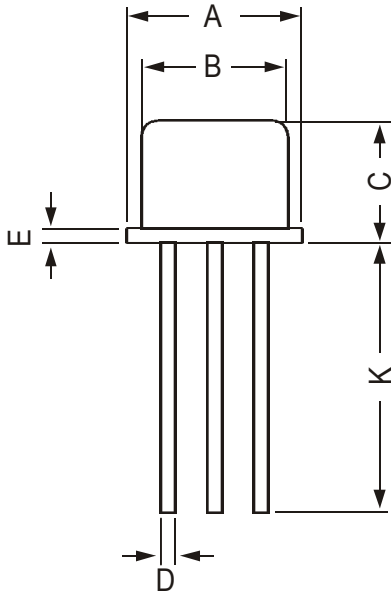
DYNAMIC CHARACTERISTICS						
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Transition Frequency	f_T	$I_C=30mA, V_{CE}=100V$		145		MHz
		$f=20MHz$				
Collector Base Time Constant	$rb'Cc$	$I_E=10mA, V_{CB}=10V,$		30	100	ps
		$f=10MHz$				
Feedback Capacitance	C_{re}	$V_{CE}=20V, I_C=10mA,$		3.5		pF
		$f=1.0MHz$				

*Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$

BD115

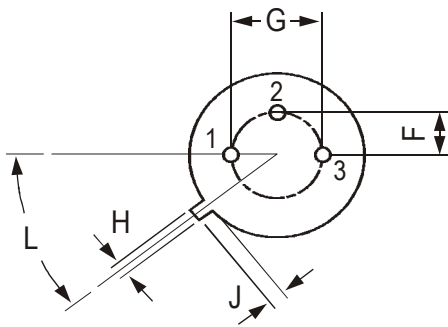
**TO-39
Metal Can Package**

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 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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