

#### Continental Device India Limited

An IS/ISO 9002 and IECQ Certified Manufacturer



### NPN SILICON HIGH VOLTAGE POWER TRANSISTORS

BF257, BF258, BF259

TO-39 Metal Can Package



### Intended for Video Output stages in Black and White and in Colour Television Receivers

### **ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	BF257	BF258	BF259	UNITS
Collector Base Voltage	V <sub>CBO</sub>	160	250	300	V
Collector Emitter Voltage	V <sub>CEO</sub>	160	250	300	V
Emitter Base Voltage	V <sub>EBO</sub>		5		V
Collector Current - Continuous	I <sub>C</sub>	100			mA
Collector Current - Peak	I <sub>CM</sub>	300			mA
Power Dissipation @ T <sub>a</sub> =25°C	P <sub>D</sub>	1			W
Derate Above 25°C		5.71			mW/ °C
Power Dissipation @ T <sub>c</sub> =25°C	$P_{D}$	5			W
Derate Above 25°C		28.57			mW/ °C
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	- 65 to +200			°C

#### THERMAL CHARACTERISTICS

Junction to Ambient in free air	$R_{th(j-a)}$	175	°C/W
Junction to Case	R <sub>th(i-c)</sub>	35	°C/W

# ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	BF257 BF258 BF259		UNITS		
Collector Emitter Voltage	$V_{CEO}$	$I_C=10$ mA, $I_B=0$	>160 >250 >300		V		
Collector Base Voltage	$V_{CBO}$	$I_{C}=100\mu A, I_{E}=0$	>160	>250	>300	V	
Emitter Base Voltage	$V_{EBO}$	$I_E=100\mu A, I_C=0$	>5		V		
Collector Cut off Current	I <sub>CBO</sub>	$V_{CB}$ =100V, $I_{E}$ =0	<50			nA	
		$V_{CB}=200V$ , $I_{E}=0$	V <sub>CB</sub> =200V, I <sub>E</sub> =0			nA	
		$V_{CB}$ =250V, $I_{E}$ =0			<50	nA	
DC Current Gain	h <sub>FE</sub>	I <sub>C</sub> =30mA, V <sub>CE</sub> =10V	>25				
Collector Emitter Saturation Voltage	V <sub>CE (sat)</sub>	I <sub>C</sub> =30mA, I <sub>B</sub> =6mA	<1		V		

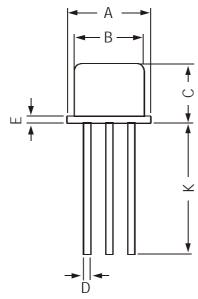
### **DYNAMIC CHARACTERISTICS**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Transition Frequency	$f_T$	$I_C=15mA, V_{CE}=10V, f=100MHz$		75		MHz
Collector Base Capacitance	$C_{cb}$	$V_{CB}$ =30V, $I_E$ =0, f=1MHz		2.5		pF

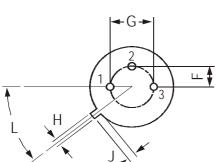
BF257\_259 Rev\_1 231202E

# TO-39 Metal Can Package

# **TO-39 Metal Can Package**



	DIM	MIN	MAX
	Α	8.50	9.39
	В	7.74	8.50
	С	6.09	6.60
	D	0.40	0.53
<sub>Ε</sub>	Ε	_	0.88
ш	F	2.41	2.66
All dimensions are in mm	G	4.82	5.33
ns 8	Н	0.71	0.86
nsio	J	0.73	1.02
ime	Κ	12.70	
All c	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 Oty 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

Notes BF257, BF258, BF259

TO-39 Metal Can Package

#### **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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