

SILICON PLANAR TRANSISTORS

BC440 / BC441 NPN
BC460 / BC461 PNP



TO-39
Metal Can Package

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	BC440 / BC460	BC441 / BC461	UNIT
Collector Base Voltage	V_{CBO}	50	70	V
Collector Emitter Voltage	$V_{CEO(SUS)}$	40	60	V
Collector Emitter Voltage, $R_{BE}=100\Omega$	V_{CER}	50	70	V
Emitter Base Voltage	V_{EBO}	5		V
Collector Current	I_C	1		A
Collector Peak Current	I_{CM}	2		A
Power Dissipation at $T_a=25^\circ C$ at $T_c=25^\circ C$	P_D	1		W
		10		W
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200		$^\circ C$

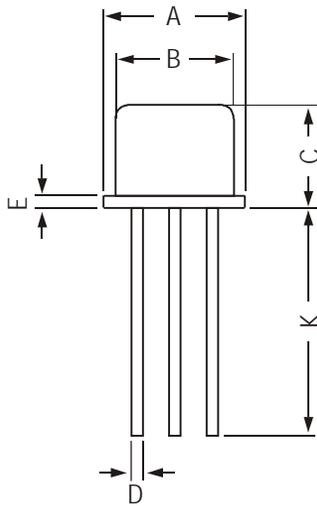
THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	17.5	$^\circ C/W$
Junction to Ambient	$R_{th(j-a)}$	175	$^\circ C/W$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$ unless specified otherwise)

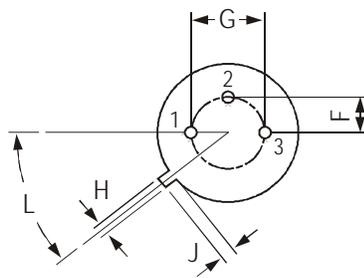
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Cut Off Current	I_{CBO}	$V_{CB}=40V, I_E=0$		100	nA
Collector Cut Off Current $R_{BE}=100\Omega$	I_{CER}	$V_{CB}=50V, I_E=0$ BC440/ BC460		10	mA
		$V_{CB}=70V, I_E=0$ BC441/ BC461		10	mA
Collector Emitter Voltage	V_{CEO}	$I_C=10mA, I_B=0$ BC440/ BC460	40		V
		$I_C=10mA, I_B=0$ BC441/ BC461	60		
Emitter Base Voltage	V_{EBO}	$I_E=100\mu A, I_C=0$	5		V
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=0.1A$		1	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A, I_B=0.1A$		1.5	V
DC Current Gain	hFE	$I_C=500mA, V_{CE}=4V$	Group 4	40	250
				Group 5	40
			Group 6	60	130
		$I_C=1A, V_{CE}=2V$	20		
Transistion Frequency	f_T	$I_C=50mA, V_{CE}=4V, f=1MHz$	50		MHz

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

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).



Continental Device India Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company



Customer Notes

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Disclaimer

The product information and the selection guides facilitate selection of the CDIL's 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 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).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



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