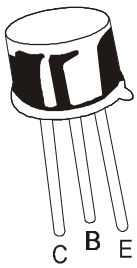
Continental Device India Limited

An ISO/TS16949 and ISO 9001 Certified Company

PNP SILICON POWER SWITCHING TRANSISTORS

BC160, BC161



TO-39
Metal Can Package

Medium Power Amplifier and Switching Applications

Complementary BC140 and BC141

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	BC160	BC161	UNITS
Collector Emitter Voltage	V_{CEO}	40	60	V
Collector Base Voltage	V_{CBO}	40	60	V
Emitter Base Voltage	V_{EBO}	5.0		V
Collector Current - Continuous	I_C	1.0		A
Power Dissipation@ T_a=25ºC	P_D	0.8		W
Derate Above 25ºC		4.57		mW/ ºC
Power Dissipation@ T_c=25ºC	P_D	4.0		W
Derate Above 25ºC		22.73		mW/ ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200		ºC

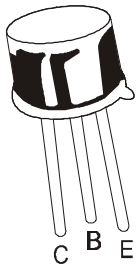
THERMAL CHARACTERISTICS

Junction to Ambient in free air	$R_{th(j-a)}$	219	ºC/W
Junction to Case	$R_{th(j-c)}$	44	ºC/W

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION		MIN	TYP	MAX	UNITS
Collector Emitter Voltage	V_{CES}	I_C=100µA, V_{BE}=0					
			BC160	40			V
			BC161	60			V
Collector Emitter Voltage	*V_{CEO}	I_C=10mA, I_B=0					
			BC160	40			V
			BC161	60			V
Emitter Base Voltage	V_{EBO}	I_E=100µA, I_C=0		5			V
Collector Cut off Current	I_{CES}	V_{CE}=40V, V_{BE}=0,	BC160			100	nA
		V_{CE}=60V, V_{BE}=0,	BC161			100	nA
		T_a=150ºC					
		V_{CE}=40V, V_{BE}=0,	BC160			100	µA
		V_{CE}=60V, V_{BE}=0,	BC161			100	µA
DC Current Gain	*h_{FE}	I_C=100mA, V_{CE}=1V					
			BC160 / BC161	40		400	
			Group-6	40		100	
			Group-10	63		160	
			Group-16	100		250	

***Pulsed: Pulse duration ≤300µs, duty cycle ≤1%**



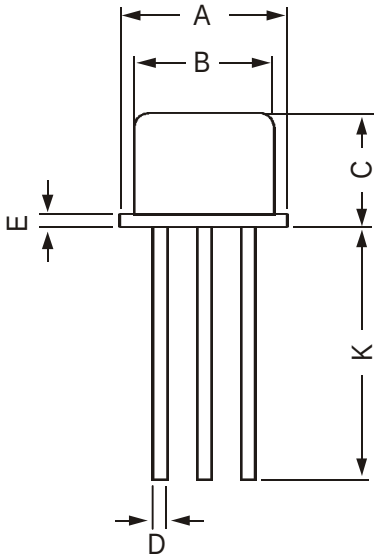
TO-39
Metal Can Package

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DC Current Gain	*h_{FE}	I_C=1A, V_{CE}=1V				
		BC160 / BC161		26		
		Group-6		15		
		Group-10		20		
		Group-16		30		
Collector Emitter Saturation Voltage	*$V_{CE\ (sat)}$	I_C=1A, I_B=0.1A			1.0	V
Base Emitter on Voltage	*$V_{BE\ (on)}$	I_C=1A, V_{CE}=1V			1.7	V
DYNAMIC CHARACTERISTICS						
Transition Frequency	f_T	I_C=50mA,V_{CE}=10V, f=20MHz	50			MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz			30	pF
Input Capacitance	C_{ib}	V_{EB}=10V, I_C=0, f=1MHz			180	pF
SWITCHING CHARACTERISTICS						
Turn on time	t_{on}	I_C=150mA, I_{B1}=5µA			500	ns
Turn off time	t_{off}	I_C=100mA, I_{B1}=I_{B2}=5µA			650	ns

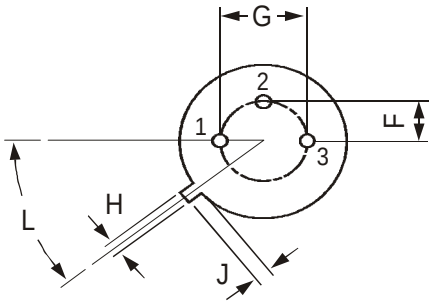
***Pulsed: Pulse duration ≤300µs, duty cycle ≤1%**

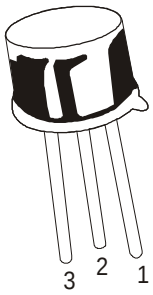
TO-39 Metal Can Package



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 Details

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

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).

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

CDIL is a registered Trademark of
Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119
email@cdil.com www.cdilsemi.com

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Bipolar Transistors - BJT ***category:***

Click to view products by CDIL ***manufacturer:***

Other Similar products are found below :

619691C MCH4017-TL-H MJ15024/WS MJ15025/WS BC546/116 BC556/FSC BC557/116 BSW67A HN7G01FU-A(T5L,F,T NJVMJD148T4G NSVMMBT6520LT1G NTE187A NTE195A NTE2302 NTE2330 NTE2353 NTE316 IMX9T110 NTE63 NTE65 C4460 SBC846BLT3G 2SA1419T-TD-H 2SA1721-O(TE85L,F) 2SA1727TLP 2SA2126-E 2SB1202T-TL-E 2SB1204S-TL-E 2SC5488A-TL-H 2SD2150T100R SP000011176 FMC5AT148 2N2369ADCSM 2SB1202S-TL-E 2SC2412KT146S 2SC4618TLN 2SC5490A-TL-H 2SD1816S-TL-E 2SD1816T-TL-E CMXT2207 TR CPH6501-TL-E MCH4021-TL-E BC557B TTC012(Q) BULD128DT4 JANTX2N3810 Jantx2N5416 US6T6TR KSF350 068071B