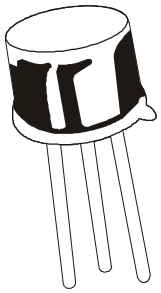
PNP SILICON EPITAXIAL TRANSISTORS

BC160, -6, -10, -16
BC161, -6, -10, -16
TO-39



Medium Power Amplifier & Switching Applications
Complementary BC140 & BC141

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	BC160		BC161	UNITS
Collector -Emitter Voltage	VCE0	40		60	V
Collector -Base Voltage	VCBO	40		60	V
Emitter -Base Voltage	VEBO		5.0		V
Collector Current- Continuous	IC		1.0		A
Power Dissipation@ Ta=25 deg C	PD		0.8		W
Derate Above 25 deg C			4.6		mW/deg C
Power Dissipation@ Tc=25 deg C	PD		3.7		W
Derate Above 25 deg C			20		mW/deg C
Operating & Storage Junction Temperature Range	Tj, Tstg		-65 to +200		deg C
THERMAL RESISTANCE					
Junction to Ambient	Rth(j-a)		200		deg C/W
Junction to Case	Rth(j-c)		35		deg C/W

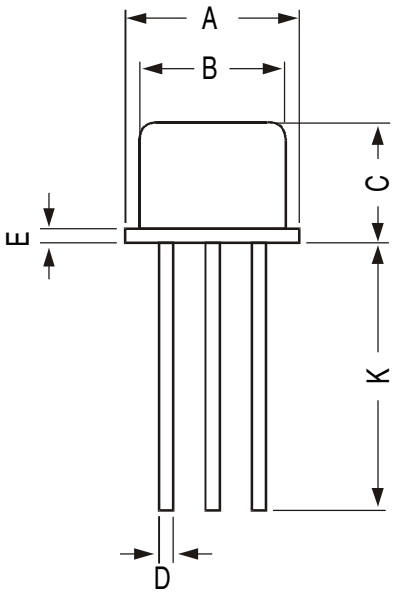
ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

DESCRIPTION	SYMBOL		BC160		BC161	UNITS
Collector -Emitter Voltage	VCES	IC=100uA, VBE=0	>40		>60	V
	VCEO*	IC=10mA,IB=0	>40		>60	V
Emitter-Base Voltage	VEBO	IE=100uA, IC=0		>5.0		V
Collector-Cut off Current	ICES	VCE=40V, VBE=0	<100		-	nA
		VCE=60V, VBE=0	-		<100	nA
		Ta=150 deg C				
		VCE=40V, VBE=0	<100		-	uA
		VCE=60V, VBE=0	-		<100	uA
DC Current Gain	hFE*	IC=100mA,VCE=1V				
		BC160,BC161		40-400		
		Group-6		40-100		
		Group-10		63 to 160		
		Group-16		100 to 250		
		IC=1A,VCE=1V				
		BC160,BC161		typ 26		
		Group-6		typ 15		
		Group-10		typ 20		
		Group-16		typ 30		
Collector Emitter Saturation Voltage	VCE(Sat) *	IC=1A, IB=0.1A		<1.0		V
Base Emitter on Voltage	VBE(on) *	IC=1A,VCE=1V		<1.7		V

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)			BC160-161	
DESCRIPTION	**SYMBOL**		**BC160/161**	**UNITS**
DYNAMIC CHARACTERISTICS				
Current Gain Bandwidth Product	ft	IC=50mA,VCE=10V f=20MHz	>50	MHz
Out-Put Capacitance	Cob	VCB=10V, f=1MHz	<30	pF
In-Put Capacitance	Cib	VEB=10V, f=1MHz	<180	pF
SWITCHING CHARACTERISTICS				
Turn on time	ton	IC=150mA, IB1=5 uA	<500	ns
Turn off time	toff	IC=100mA, IB1=IB2=5 uA	<650	ns

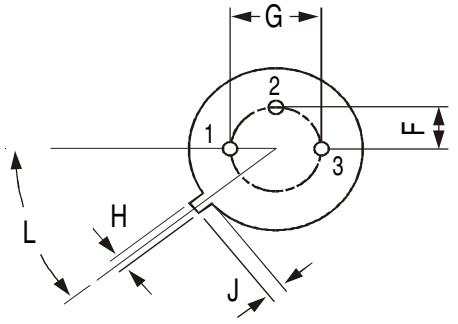
***Pulsed: Pulse Duration=300us, Duty Cycle=1%**

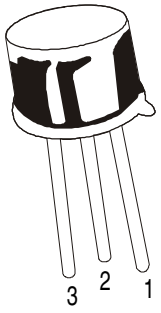
TO-39 Metal Can Package



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 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"	20.0K	17" x 15" x 13.5"	32.0K	40 kgs

Notes

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 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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