

CentralTM Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

BC140 SERIES
BC141 SERIES

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR BC140 and BC141 series types are NPN Silicon Transistors designed for general purpose switching and amplifier applications.

MAXIMUM RATINGS (T_A=25°C)

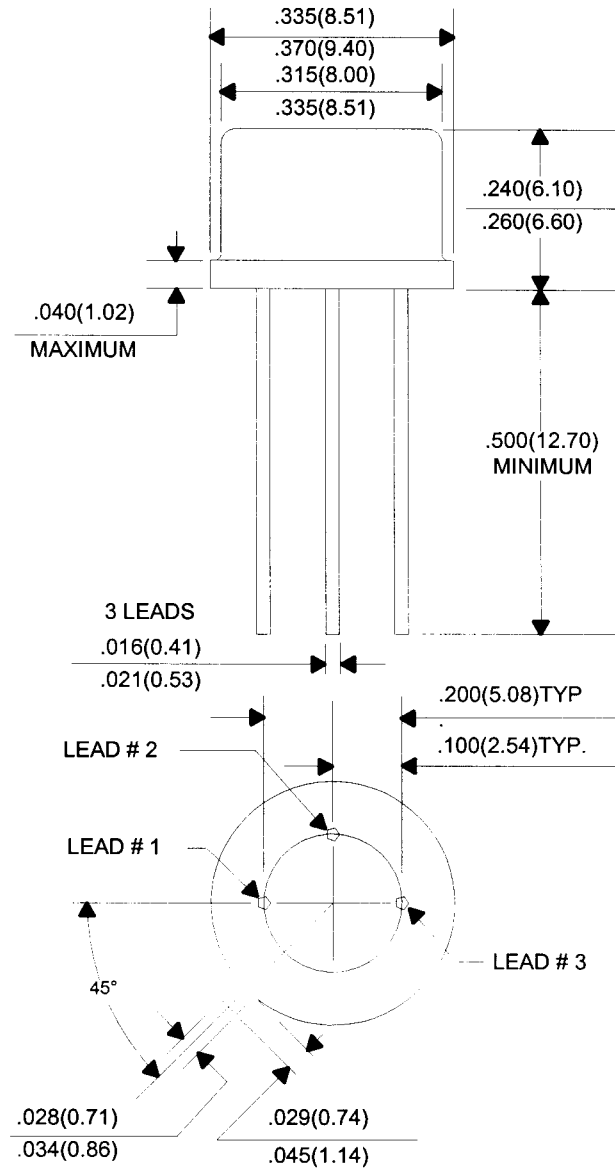
	SYMBOL	BC140	BC141	UNITS
Collector-Base Voltage	V _{CB0}	80	100	V
Collector-Emitter Voltage	V _{CEO}	40	60	V
Emitter-Base Voltage	V _{EBO}		7.0	V
Collector Current	I _C		1.0	A
Collector Current (Peak)	I _{CM}		1.5	A
Base Current (Peak)	I _{BM}		200	mA
Power Dissipation	P _D		0.8	W
Power Dissipation (T _C =45°C)	P _D		3.7	W
Operating and Storage				
Junction Temperature	T _J , T _{stg}	-65 to +200		°C
Thermal Resistance	θ _{JA}	219		°C/W
Thermal Resistance	θ _{JC}	42		°C/W

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{CB0}	V _{CB} =60V			100	nA
I _{CB0}	V _{CB} =60V, T _A =150°C			100	μA
I _{EBO}	V _{EB} =5.0V			100	nA
V _{CE(SAT)}	I _C =1.0A, I _B =100mA			1.0	V
V _{BE(ON)}	V _{CE} =1.0V, I _C =1.0A			1.8	V
h _{FE}	V _{CE} =1.0V, I _C =100μA (BC140-10, BC141-10)	50	100		
h _{FE}	V _{CE} =1.0V, I _C =100μA (BC140-16, BC141-16)	100	205		
h _{FE}	V _{CE} =1.0V, I _C =100mA (BC140-10, BC141-10)	63	110	160	
h _{FE}	V _{CE} =1.0V, I _C =100mA (BC140-16, BC141-16)	100	195	250	
h _{FE}	V _{CE} =1.0V, I _C =1.0A (BC140-10, BC141-10)	10	30		
h _{FE}	V _{CE} =1.0V, I _C =1.0A (BC140-16, BC141-16)	15	35		
f _T	V _{CE} =10V, I _C =50mA, f=100MHz	50			MHz
C _c	V _{CB} =10V, I _E =0, f=1.0MHz			25	pF
C _e	V _{EB} =0.5V, I _C =0, f=1.0MHz			80	pF
t _{on}	I _C =100mA, I _{B1} =I _{B2} =5.0mA			250	ns
t _{off}	I _C =100mA, I _{B1} =I _{B2} =5.0mA			850	ns

(See Reverse Side)

JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

1. Emitter
2. Base
3. Collector

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