

NPN medium power transistors

BC140; BC141

FEATURES

- High current (max. 1 A)
- Low voltage (max. 60 V).

APPLICATIONS

- General purpose switching and amplification.

DESCRIPTION

NPN medium power transistor in a TO-39 metal package.
 PNP complements: BC160 and BC161.

PINNING

PIN	DESCRIPTION
1	emitter
2	base
3	collector, connected to case

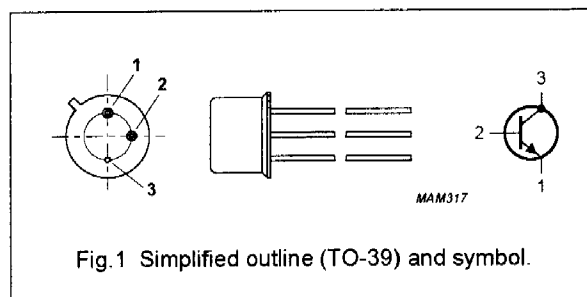


Fig. 1 Simplified outline (TO-39) and symbol.

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V _{CB0}	collector-base voltage	open emitter				
	BC140		—	—	80	V
	BC141		—	—	100	V
V _{CE0}	collector-emitter voltage	open base				
	BC140		—	—	40	V
	BC141		—	—	60	V
I _{CM}	peak collector current		—	—	1.5	A
P _{tot}	total power dissipation	T _{case} ≤ 45 °C	—	—	3.7	W
h _{FE}	DC current gain	I _C = 100 mA; V _{CE} = 1 V				
	BC140-10; BC141-10		63	100	160	
	BC140-16; BC141-16		100	160	250	
f _T	transition frequency	I _C = 50 mA; V _{CE} = 10 V; f = 100 MHz	50	—	—	MHz



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter	-	80	V
	BC140			100	V
V _{CEO}	collector-emitter voltage	open base	-	40	V
	BC140			60	V
V _{EBO}	emitter-base voltage	open collector	-	7	V
I _C	collector current (DC)		-	1	A
I _{CM}	peak collector current		-	1.5	A
I _{BM}	peak base current		-	200	mA
P _{tot}	total power dissipation	T _{case} ≤ 45 °C	-	3.7	W
T _{stg}	storage temperature		-65	+150	°C
T _j	junction temperature		-	175	°C
T _{amb}	operating ambient temperature		-65	+150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	in free air	200	K/W
R _{th j-c}	thermal resistance from junction to case		35	K/W

This datasheet has been downloaded from:

www.DatasheetCatalog.com

Datasheets for electronic components.