

NPN Silicon Planar Transistor

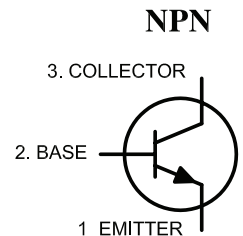
40V_{CEO}, 0.7A I_c

multicomp PRO

**RoHS
Compliant**



TO-39



Absolute Maximum Ratings

Description	Symbol	Value	Unit
Collector Emitter Voltage	V _{CEO}	40	V
Collector Base Voltage	V _{CBO}	60	V
Emitter Base Voltage	V _{EBO}	5	V
Collector Current Continuous	I _c	0.7	A
Power Dissipation at T _A = 25°C Derate above 25°C	P _D	5 28.6	W mW/°C
Operating and Storage Junction Temperature Range	T _j , T _{stg}	- 65 to +200	°C
Lead Temperature 1/16", ±1/32" from Case for 10s	T _L	+235	°C
Thermal Resistance			
Junction to Case	R _{th(j-c)}	35	°C/W

Electrical Characteristics: (T_A = +25°C Unless otherwise specified)

Description	Symbol	Test Conditions	Value	Unit
Collector Emitter Voltage	V _{CEO}	I _c = 1mA, I _B = 0	>40	V
Collector Emitter Voltage	V _{CER}	I _c = 1mA, R _{BE} = 10Ω	>50	V
Collector Base Voltage	V _{CBO}	I _c = 100μA, I _E = 0	>60	V
Emitter Base Voltage	V _{EBO}	I _E = 100μA, I _c = 0	>5	V
Collector Cut off Current	I _{CEx}	V _{CE} = 30V, I _E = 0, V _{BE} (off) = 1.5V	<250	nA
DC Current Gain	*h _{FE}	I _c = 150mA, V _{CE} = 2.5V I _c = 150mA, V _{CE} = 10V	>25 50 - 250	
Collector Emitter Saturation Voltage	*V _{CE(Sat)}	I _c = 150mA, I _B = 15mA	<1.4	V
Base Emitter Saturation Voltage	*V _{BE(Sat)}	I _c = 150mA, I _B = 15mA	<1.7	V
Base Emitter On Voltage	*V _{BE(On)}	I _c = 150mA, V _{CE} = 2.5V	<1.7	V

Small Signal Characteristics

Current Gain Bandwidth Product	f _T	I _c = 50mA, V _{CE} = 10V, f = 20MHz	>100	MHz
Output Capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 140kHz	<15	pF
Input Capacitance	C _{ib}	V _{EB} = 0.5V, I _c = 0, f = 140kHz	<80	pF

*Pulse Test: Pulse Width < 300μs, Duty Cycle ≤ 2%

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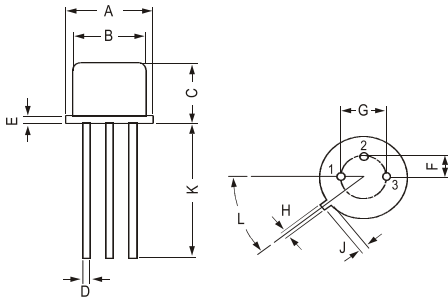
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TO-39 Metal Can Package



Dim.	Min.	Max.
A	8.5	9.39
B	7.74	8.5
C	6.09	6.6
D	0.4	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	12.7	-
L	42 Deg.	48 Deg.

Dimensions : Millimetres

Part Number Table

Description	Part Number
NPN Silicon Planar Transistor, 40V, 0.7A, TO-39	MP001169

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