

Medium Power Transistor



Pin Configuration

1. Emitter
2. Base
3. Collector

Features:

- High performance, low frequency devices typically with current ratings 2A. Up to 1W power dissipation
- PNP Epitaxial Planar Silicon Transistors

Absolute Maximum Ratings:

($T_a = 25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	350	V
Collector-Emitter Voltage	$V_{\text{CEO (sus)}}$	300	
Collector-Emitter Voltage $R_{\text{BE}} = 100\Omega$	V_{CER}		
Emitter-Base Voltage	V_{EBO}	6	
Collector Peak Current	I_{CM}	1	A
Base Current	I_{B}	0.5	
Power Dissipation at $T_a = 25^\circ\text{C}$ at $T_c 25^\circ\text{C}$	P_{tot}	1 10	W
Operating Storage Temperature Range	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

Thermal Resistance

Junction to Ambient	$R_{\text{th(j-a)}}$	17.5	$^\circ\text{C/W}$
Junction to Case	$R_{\text{th(j-c)}}$		

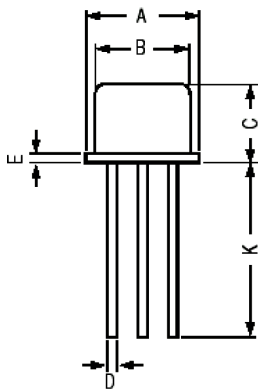
Electrical Characteristics:

($T_a = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Max.	Unit
Collector-Cut off Current $R_{BE} = 100\Omega$	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	-	100	nA
	I_{CER}	$V_{CE} = 70\text{V}$		10	μA
Collector-Emitter Voltage	V_{CEO}^*	$I_C = 10\text{mA}, I_B = 0$	60	-	V
Emitter-Base Voltage	V_{EBO}	$I_E = 100\mu\text{A}, I_C = 0$	5		
DC Current Gain	h_{FE}^*	$I_C = 500\text{mA}, V_{CE} = 4\text{V}$	40	250	-
Collector Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C = 1,000\text{mA}, I_B = 100\text{mA}$	-	1	V
Base Emitter Saturation Voltage	$V_{BE(sat)}^*$	$I_C = 1\text{A}, I_B = 100\text{mA}$		1.5	
Transition Frequency	f_t	$I_C = 50\text{mA}, V_{CE} = 4\text{V}, f = 1\text{MHz}$	50	-	MHz

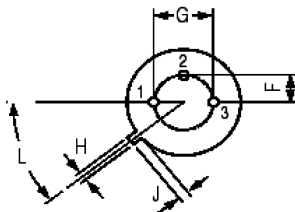
*Pulse : Pulse Duration = 300 μs , Duty Cycle = 1%

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°	48°

Dimensions : Millimetres



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Part Number Table

Description	Part Number
Transistor, PNP, TO-39	BC461

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