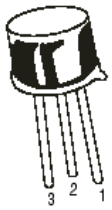
Medium Power Bipolar Transistor



Pin Configuration
1. Emitter
2. Base
3. Collector

Features:

- High performance, low frequency devices typically with current ratings 1A. Up to 1W power dissipation
- Silicon power switching transistors
- Medium power amplifier and switching applications

Absolute Maximum Ratings:

(T_a = 25°C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CEO}	-75	
Emitter-Base Voltage	V_{EBO}	-7	
Collector Current Continuous	I_C	-2	A
Base Current	I_B	-1	
Power Dissipation at T_a = 25°C Derate above 25°C	P_D	1 5.71	W mW/°C
Power Dissipation at T_C = 25°C Derate above 25°C		10 57.14	
Operating Temperature	T_J	200	°C
Storage Temperature Range	T_{stg}	-65 to +200	

Thermal Resistance

Junction to Ambient	$R_{th(j-a)}$	175	°C/W
Junction to Case	$R_{th(j-c)}$	17.5	

Electrical Characteristics:

(T_a = +25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Max.	Unit
Collector Emitter Voltage	$V_{CE}O$	I_C = 100mA, I_B = 0	-75	-	V
Collector Cut off Current	I_{CEX}	V_{CE} = 70V, V_{BE} = 1.5V, T_C = 150°C	-	5	mA
		V_{CE} = 100V, V_{BE} = 1.5V		100	µA
Emitter Cut off Current	I_{EBO}	V_{BE} = 7V, I_C = 0			
DC Current Gain	*h_{FE}	I_C = 1A, V_{CE} = 2V	10	-	-
		I_C = 0.5A, V_{CE} = 4V	30	130	
Collector Emitter Saturation Voltage	*$V_{CE\ (Sat)}$	I_C = 50mA, I_B = 50mA	-	0.7	V
Base Emitter On Voltage	*$V_{BE\ (On)}$	I_C = 50mA, V_{CE} = 4V		1.1	

Dynamic Characteristics

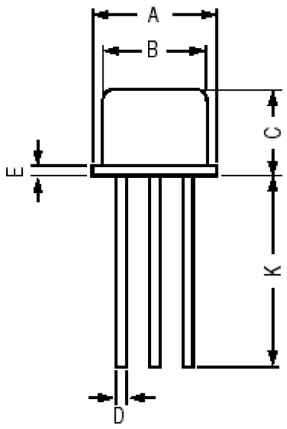
Small Signal Current Gain	h_{fe}	I_C = 50mA,V_{CE} = 4V, f = 10MHz	5	-	-

Switching Characteristics

Turn On Time	t_{on}	V_{CC} = 30V, I_C = 500mA, I_{B1} = 50mA	-	100	ns
Turn Off Time	t_{off}	V_{CC} = 30V, I_C = 500mA, I_{B1} = I_{B2} = 50mA		1,000	

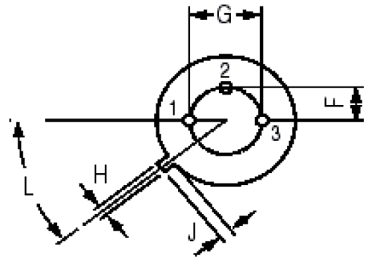
*Pulsed: Pulse Width ≤30µs, Duty Cycle ≤2%

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	2N5322