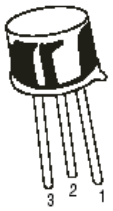
General Purpose Transistor



Pin Configuration
1. Emitter
2. Base
3. Collector

Features:

- PNP Silicon Planar RF Transistor
- Small Signal General Purpose Amplifier, Transistor

Absolute Maximum Ratings:

(T_a = 25°C unless otherwise specified)

Characteristic	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}		
Emitter-Base Voltage	V_{EBO}	5	
Collector Current	I_{CM}	1	A
Power Dissipation at T_a = 25°C Derate above 25°C	P_D	800 4.6	mW mW/°C
Power Dissipation at T_C = 25°C Derate above 25°C		4 22.85	W mW/°C
Operating and Storage Temperature Range	T_j, T_{stg}	-65 to +200	°C

Electrical Characteristics:

(T_a = +25°C unless otherwise specified)

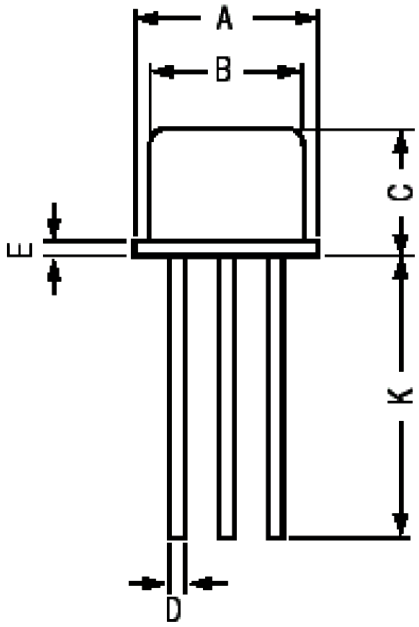
Parameter	Symbol	Test Condition	Min.	Max.	Unit
Collector Emitter Breakdown Voltage	BV_{CEO}*	I_C = 10mA, I_B = 0	80	-	V
Collector Base Breakdown Voltage	BV_{CBO}	I_C = 10µA, I_E = 0			
Emitter Base Breakdown Voltage	BV_{EBO}	I_E = 10µA, I_C = 0	5		
Collector Leakage Current	I_{CBO}	V_{CB} = 60V, I_E = 0	-	50	nA
		V_{CB} = 60V, T_A = 150ºC			µA
Emitter Leakage Current	I_{EBO}	V_{EB} = 5V, I_C = 0	-	10	µA
Collector Emitter Saturation Voltage	$V_{CE\ (Sat)}$*	I_C = 150mA, I_B = 15mA		0.15	V
		I_C = 500mA, I_B = 50mA		0.5	
Base Emitter Saturation Voltage	$V_{BE(Sat)}$*	I_C = 150mA, I_B = 15mA		0.9	
Base Emitter On Voltage	$V_{BE(on)}$*	I_C = 500mA, V_{CE} = 0.5V		1.1	
DC Current Gain	h_{FE}*	I_C = 100mA, V_{CE} = 5V	75	300	-
		I_C = 100mA, V_{CE} = 5V	100		
		I_C = 100mA, V_{CE} = 5V, T_a = -55°C	40		
		I_C = 1A, V_{CE} = 5V	25		

Small Signal Characteristics

Transition Frequency	f_T	I_C = 50mA, V_{CE} = 10V, f = 100MHz	150	500	MHz
Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	-	20	pF
Input Capacitance	C_{ib}	V_{BE} = 0.5V, I_C = 0, f = 1MHz		110	
Turn on Time	t_{on}	I_C = 500mA, I_{B1} = 50mA		100	ns
Storage Time		I_C = 500mA, I_{B1} = I_{B2} = 50mA		350	
Fall Time	t_f	I_C = 500mA, I_{B1} = I_{B2} = 50mA		50	

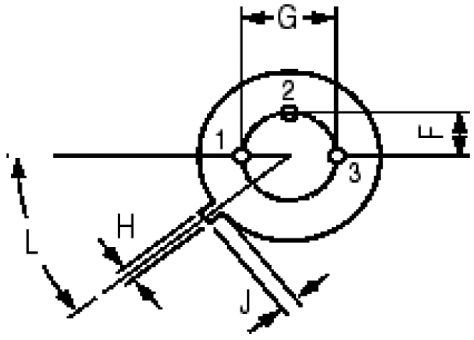
*Pulse Test: Pulse Width ≤300µs, Duty Cycle ≤2%

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



Pin Configuration

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2. Base
3. Collector

Part Number Table

Description	Part Number
Transistor, PNP, TO-39	2N4033