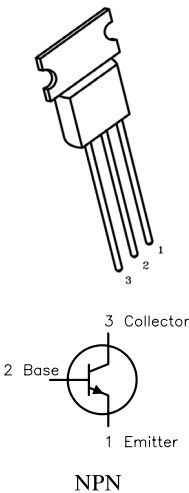


General Purpose Transistor



RoHS
Compliant



Description:

Silicon Planar Epitaxial, NPN, TO-237 Transistor. Designed for general purpose medium power amplifier and switching circuits.

Absolute Maximum Ratings:

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	1.5	A
Total Device Dissipation ($T_C = +25^{\circ}\text{C}$)	P_D	850	W
Operating Junction Temperature Range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics: ($T_A = +25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
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OFF Characteristics

Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0, (\text{Note } 1)$	40	-	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	50	-	V

General Purpose Transistor

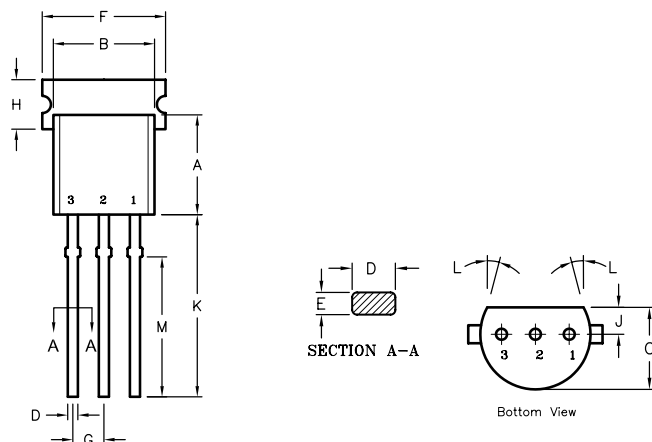
Electrical Characteristics: (TA = +25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 50V, I_E = 0$	-	100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	100	nA
ON Characteristics (Note 1)					
DC Current Gain	h_{FE}	$V_{CE} = 1V, I_C = 10mA$	55	-	-
		$V_{CE} = 1V, I_C = 100mA$	60	-	-
		$V_{CE} = 1V, I_C = 1A$	50	250	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1A, I_B = 100mA$	-	0.5	V
Base-Emitter on Voltage	$V_{BE(on)}$	$I_C = 1A, V_{CE} = 1V$	-	1.2	V

Small-Signal Characteristics

Current gain-bandwidth Product	f_T	$V_{CE} = 1V, I_C = 50mA, f = 1MHz$	50	400	MHz
Output Capacitance	C_{obo}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	-	20	pF

Note 1: Pulse Test: Pulse width $\leq 300\mu s$, Duty Cycle $\leq 2\%$



Dim.	Min.	Max.
A	4.32	5.33
B	4.45	5.2
C	3.18	4.19
D	0.41	0.55
E	0.35	0.5
F	-	5.4
G	1.14	1.4
H	-	2.54
K	12.7	-
L	5"	-
J	1.14	1.53
III	1.982	2.082

Dimensions : Millimetres

Part Number Table

Description	Part Number
Transistor, NPN, 1.5A, 40V, TO-237	2N6715

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