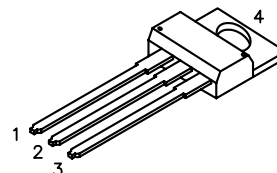
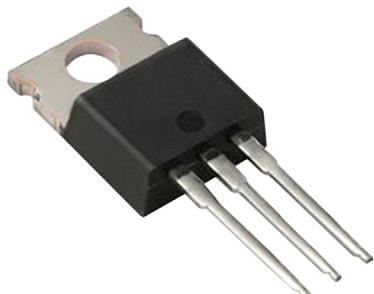


General Purpose Power Transistor



RoHS
Compliant



Pin Configuration

1. Base
2. Collector
3. Emitter
4. Collector

Description:

Silicon, TO-220, Plastic, PNP power Transistor Designed for use in general purpose amplifier and switching applications.

Features:

- High Current Gain Bandwidth Product f_r 10MHz (Min.) @ I_c 500mA
- Collector Emitter Sustaining Voltage V_{CEO} 70V (Min.)

Absolute Maximum Rating:

Parameters	Symbol	Value
Collector-Base Voltage	V_{CBO}	80V
Collector-Emitter Voltage	V_{CEO}	70V
Emitter-Base Voltage	V_{EBO}	5V
Continuous Collector Current	I_C	7A
Base Current	I_B	3A
Total Device Dissipation ($T_C = +25^\circ\text{C}$) Derate above $25^\circ\text{C} = 0.32\text{mW}/^\circ\text{C}$	P_D	40W
Operating Junction Temperature Range	T_J	-65°C to $+150^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65°C to $+150^\circ\text{C}$

General Purpose Power Transistor

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

Parameter	Symbol	Test Conditions	Min	Max	Unit
-----------	--------	-----------------	-----	-----	------

OFF Characteristics

Collector-Emitter Breakdown Voltage (Note 1)	$V_{(BR)CEO}$	$I_C = 100\text{mA}, I_B = 0$	70	-	V
Collector Cut-Off Current	I_{CEX}	$V_{CE} = 80\text{V}, V_{EB(off)} = 1.5\text{V}$	-	100	μA
	I_{CEO}	$V_{CB} = 60\text{V}, I_B = 0$	-	1	mA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-	1	mA

ON Characteristics

DC Current Gain (Note 1)	h_{FE}	$V_{CE} = 4\text{V}, I_C = 2\text{A}$	30	150	-
		$V_{CE} = 4\text{V}, I_C = 7\text{A}$	2.3	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 7\text{A}, I_B = 3\text{A}$	-	3.5	V
Base-Emitter On Voltage	$V_{BE(on)}$	$I_C = 7\text{A}, V_{CE} = 4\text{A}$	-	3	V

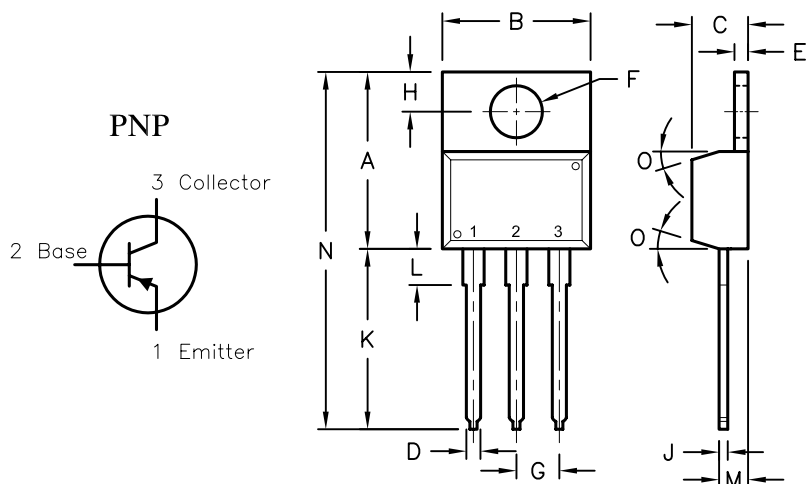
Small Signal Characteristics

Current Gain-Bandwidth Product (Note 2)	f_r	$V_{CE} = 4\text{V}, I_C = 500\text{mA}, f = 1\text{MHz}$	10	-	MHz
Output Capacitance	C_{obo}	$V_{CB} = 10\text{V}, I_C = 0.5\text{A}, f = 50\text{kHz}$	-	250	pF
Small-Signal Current Gain	h_{fe}	$V_{CE} = 4\text{V}, I_C = 0.5\text{A}, f = 50\text{kHz}$	20	-	-

Notes:

1. Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.
2. f_T is defined as the frequency at which $|h_{fe}|$ extrapolated to unity.

General Purpose Power Transistor



Dimensions	A	B	C	D	E	F	G	H	J	K	L	M	N	O
Min.	14.42	9.63	3.56	-	1.15	3.75	2.29	2.54	-	12.7	2.8	2.03	-	7°
Max	16.51	10.67	4.83	0.9	1.4	3.88	2.79	3.43	0.56	14.73	4.07	2.92	31.21	

Dimensions : Millimetres

Part Number Table

Description	Part Number
General Purpose Power Transistor, Silicon, Plastic, TO-220, PNP	2N6107

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.