

## Description:

Plastic PNP TO-220 silicon power transistor is designed for various specific and general purpose applications such as output and driver stages of amplifiers operating at frequencies from DC to greater than 1MHz series shunt and switching regulators low and high frequency inverters/converters and many others.

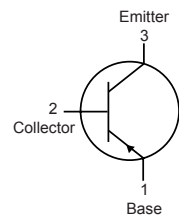
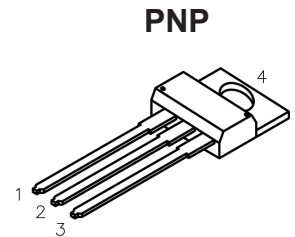
**RoHS  
Compliant**

## Features:

- Very low collector saturation voltage
- Excellent linearity
- Fast switching

## Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	$V_{CEO}$	45	V
Collector-Base Voltage	$V_{CES}$	45	
Emitter-Base Voltage	$V_{EBO}$	5	
Continuous Collector Current	$I_C$	10	A
Base Current	$I_B$	2	A
Total Device Dissipation at $T_c = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	50 0.4	W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$



## Pin Configuration:

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

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

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

### OFF Characteristics

Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=30\text{mA}, I_B=0$	45	-	V
Collector Cut-Off Current	$I_{CES}$	$V_{CE}=45\text{V}, V_{BE}=0$	-	10	$\mu\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$	-	100	

### ON Characteristics

DC Current Gain	$h_{FE}$	$V_{CE}=1\text{V}, I_C=2\text{A}$	35	-	-
		$V_{CE}=1\text{V}, I_C=4\text{A}$	20	-	-
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=8\text{A}, I_B=800\text{mA}$	-	1	V
Base - Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=8\text{A}, I_B=800\text{mA}$		1.5	

# Bipolar Transistor



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

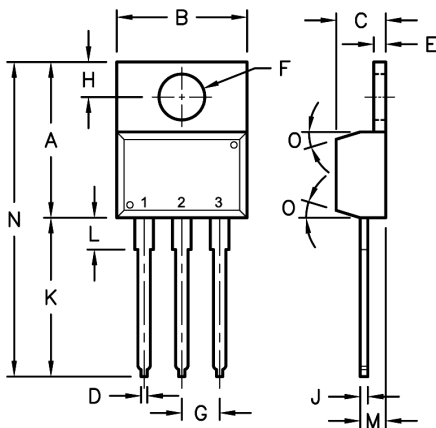
Parameter	Symbol	Test Conditions	Min.	Max.	Unit
-----------	--------	-----------------	------	------	------

### Small-Signal Characteristics

Current Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=0.5\text{MHz}$	12	-	MHz
Output Capacitance	$C_{obo}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	400	-	pF

### Switching Characteristics

Rise Time	$t_r$	$I_C=5\text{A}, I_{B1}=I_{B2}=500\text{mA}$	-	0.6	$\mu\text{A}$
Storage Time	$t_s$		-	1.2	
Fall Time	$t_f$		-	0.5	



### Pin Configuration:

1. Base
2. Collector
3. Emitter

Dimensions	A	B	C	D	E	F	G	H	J	K	L	M	N	O
Min.	14.42	9.63	3.65	-	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	31.24	

Dimensions : Millimetres

## Part Number Table

Description	Part Number
Transistor, PNP, 8A, 120V, TO-220	MJE15029

**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.