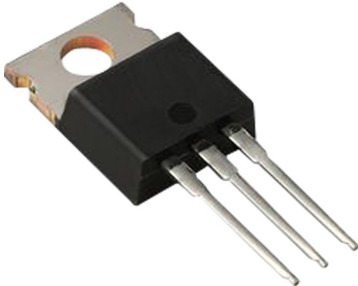
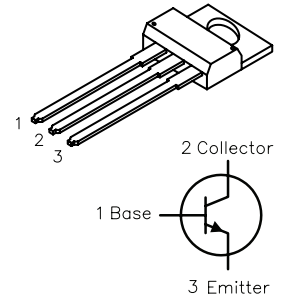


**RoHS
Compliant**



Description:

TO-220 NPN silicon plastic transistor designed for use in high frequency drivers in audio amplifier applications



Features:

Collector Emitter Saturation Voltage, $V_{CE0} = 120V$

D.C.Current Gain Specified to 8 Amperes, $h_{FE} = 40$ min. @ $I_C = 3A$
 $h_{FE} = 20$ min. @ $I_C = 4A$

Absolute Maximum Ratings:

Characteristic	Symbol	Rating
Collector - Base Voltage	V_{CBO}	150V
Collector - Emitter Voltage	V_{CEO}	150V
Emitter - Base Voltage	V_{EBO}	5V
Continuous Collector Current	I_C	8A
Base Current	I_B	2A
Total Device Dissipation ($T_c = +25^\circ C$), Derate above $25^\circ C$	P_D	50W 0.4W/ $^\circ C$
Operating Junction Temperature Range	T_J	$-65^\circ C$ to $+150^\circ C$
Storage Temperature Range	T_{STG}	$-65^\circ C$ to $+150^\circ C$

Electrical Characteristics ($T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
OFF Characteristics					
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	150	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 150V, I_E = 0$	-	10	μA
	I_{CEO}	$V_{CB} = 150V, I_B = 0$	-	0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	10	μA
ON Characteristics					
DC Current Gain, (Note 1)	h_{FE}	$V_{CE} = 2V, I_C = 0.1A$	40	-	-
		$V_{CE} = 2V, I_C = 2A$	40	-	-
		$V_{CE} = 2V, I_C = 3A$	40	-	-
		$V_{CE} = 2V, I_C = 4A$	20	-	-

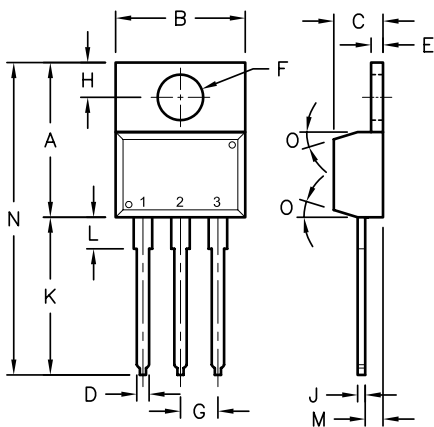
Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Collector - Emitter Saturation Voltage, Note 1	$V_{CE(sat)}$	$I_C = 1A, I_B = 0.1A$	-	0.5	V
Base - Emitter On Voltage, Note 1	$V_{BE(on)}$	$I_C = 1A, V_{CE} = 2V$	-	1	V

Small-Signal Characteristics (Note 2)

Current Gain - Bandwidth Product	f_T	$V_{CE} = 20V, I_C = 20mA, f = 100MHz$	30	-	MHz
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Note 1. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$

Note 2. f_T is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.



Pin Configuration:

1. Base
2. Collector
3. Emitter

Dim.	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
Bipolar Transistor, NPN, 8A, 150V, TO-220	MJE15030

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