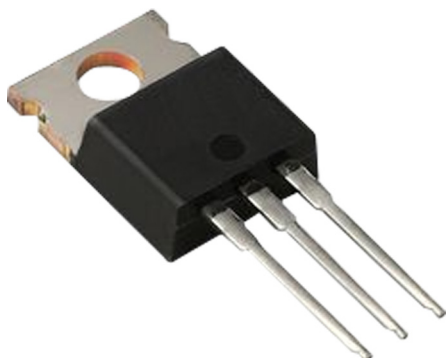
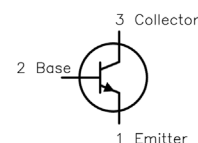
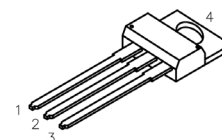


Medium Power Transistor



RoHS
Compliant



Description:

A general purpose, NPN medium power silicon, transistor in a TO-220 type package designed for switching and amplifier applications. This device is especially designed for series and shunt regulators and as a driver and output stage of high-fidelity amplifiers

Features:

Low Saturation Voltage

Maximum Ratings:

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	40	
Emitter-Base Voltage	V_{EBO}	5	
Continuous Collector Current	I_C	15	A
Continuous Base Current	I_B	5	
Total Device Dissipation ($T_C = +25^\circ\text{C}$), Derate Linearly above 25°C	P_D	75	W
Total Device Dissipation ($T_A = +25^\circ\text{C}$), Derate Linearly above 25°C		0.6	
Operating Junction Temperature Range	T_{opr}	-65 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}		
Lead Temperature (During Soldering, $\frac{1}{8}$ " (3.17mm) from case, 10 sec max)	T_L	+235	
Thermal Resistance, Junction-to-case	R_{thjc}	1.67	$^\circ\text{C/W}$
Thermal Resistance, Junction-to-Ambient		70	

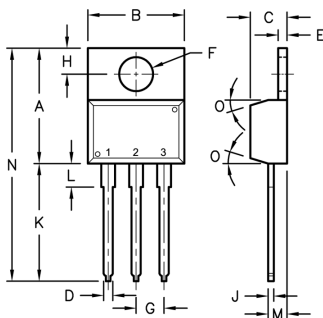
Medium Power Transistor



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

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Collector Cutoff Current	I_{CEO}	$V_{CE} = 20V, I_B = 0$	-	1	mA
	I_{CEX}	$V_{CE} = 45V, V_{BE} = 1.5V$		0.5	
		$V_{CE} = 150V, V_{BE} = 1.5V, T_C = +100^\circ$		5	
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$		1	
Collector - Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 100mA, I_B = .0, (\text{Note } 1)$	40	-	V
DC Current Gain	h_{FE}	$I_C = 5A, V_{CE} = .4V, (\text{Note } 1)$	20	150	-
		$I_C = 15A, V_{CE} = .4V, (\text{Note } 1)$	5	-	
Base - Emitter Voltage	$V_{BE(on)}$	$I_C = 5A, V_{CE} = .4V, (\text{Note } 1)$	-	1.3	V
		$I_C = 15A, V_{CE} = .4V, (\text{Note } 1)$		3.5	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = .500mA, (\text{Note } 1)$	-	1.3	
		$I_C = 15A, I_B = .5A, (\text{Note } 1)$		3.5	
Small Signal Forward Current Transfer Ratio	h_{FE}	$V_{CE} = 4V, I_C = 1A, f = 1MHz$	5	-	-
Gain Bandwidth Product	f_T	$V_{CE} = 4V, I_C = 1A$			MHz
Small Signal Forward Current Transfer Ratio	h_{FE}	$I_C = 1A, V_{CE} = 4V, f = 1MHz$			-

Note 1 : Pulsed : Pulse Duration = 300 μ s, Duty Factor = 2%



Pin Configuration:

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

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
Transistor, NPN, 15A, 40V, TO-220	2N6486

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