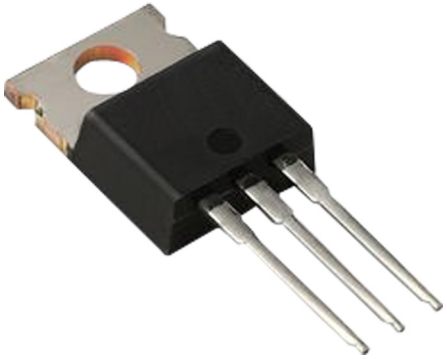
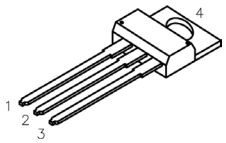
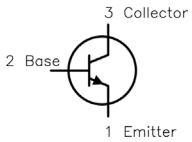
Medium Power Transistor

multicomp PRO

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°C), Derate Linearly above 25°C	P_D	75 0.6	W W/°C
Total Device Dissipation (T_A = +25°C), Derate Linearly above 25°C		1.8 0.0144	
Operating Junction Temperature Range	T_{opr}	-65 to +150	°C
Storage Temperature Range	T_{stg}		
Lead Temperature (During Soldering, ⅛" (3.17mm) from case, 10 sec max)	T_L	+235	
Thermal Resistance, Junction-to-case	R_{thjc}	1.67	°C/W
Thermal Resistance, Junction-to-Ambient		70	

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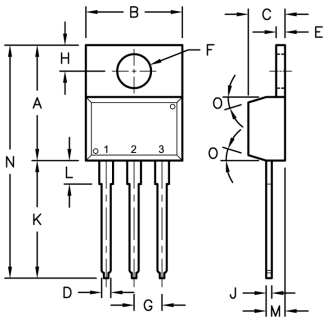
Electrical Characteristics (T_C = 25°C unless otherwise specified)

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°		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, (Note 1)	40	-	V
DC Current Gain	h_{FE}	I_C = 5A, V_{CE} = .4V, (Note 1)	20	150	-
		I_C = 15A, V_{CE} = .4V, (Note 1)	5	-	
Base - Emitter Voltage	$V_{BE(on)}$	I_C = 5A, V_{CE} = .4V, (Note 1)	-	1.3	V
		I_C = 15A, V_{CE} = .4V, (Note 1)		3.5	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 5A, I_B = .500mA, (Note 1)		1.3	
		I_C = 15A, I_B = .5A, (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 = 300µs, 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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