Bipolar Transistor



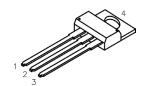


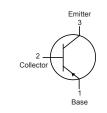
Description:

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

PNP





Pin Configuration:

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

Features:

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

Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	V _{CEO}	45	
Collector-Base Voltage	V _{CES}	45	V
Emitter-Base Voltage	V _{EBO}	5	
Continuous Collector Current	I _C	10	Α
Base Current	I _B	2	Α
Total Device Dissipation at T _c = 25°C Derate above 25°C	P _D	50 0.4	W W/°C
Operating and Storage Junction Temperature Range	T _j , T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Test Conditions	Min.	Max.	Unit		
OFF Characteristics							
Collector - Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =30mA, I _B =0	45	-	V		
Collector Cut-Off Current	I _{CES}	V _{CE} =45V, V _{BE} =0	V _{CE} =45V, V _{BE} =0 -				
Emitter Cut-Off Current	I _{EBO}	V_{EB} =5V, I_{C} =0	-	100	μA		
ON Characteristics							
		V ₀₅ =1V, I ₀ =2A	35	_	_		

DC Current Gain	h	V _{CE} =1V, I _C =2A	35	1	-
DC Current Gain	h _{FE}	V _{CE} =1V, I _C =4A	20	-	-
Collector - Emitter Saturation Voltage	V _{CE(sat)}	I _C =8A, I _B =800mA	1	1	\/
Base - Emitter Saturation Voltage	V _{BE(sat)}	I _C =8A, I _B =800mA		1.5	V

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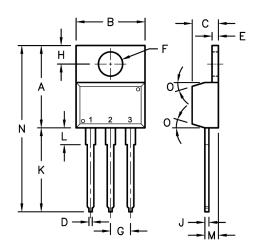


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Electrical Characteristics (T_a = 25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Small-Signal Characteristics					
Current Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =500mA, f=0.5MHz	12	-	MHz
Output Capacitance	C _{obo}	V _{CB} =10V, I _E =0, f=1MHz	400	-	pF
Switching Characteristics					
Rise Time	t _r		-	0.6	
Storage Time	t _s	I _C =5A, I _{B1} =I _{B2} =500mA	-	1.2	μΑ
Fall Time	t _f		-	0.5	



Pin Configuration:

- 1. Base
- 2. Collector
- 3. Emitter

Dimensions	Α	В	С	D	Е	F	G	Н	J	K	L	М	N	0
Min.	14.42	9.63	3.65	-	1.15	3.75	2.29	2.54	-	12.7	2.8	2.03	-	70
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	<i>'</i>

Dimensions: Millimetres

Part Number Table

Description	Part Number
Transistor, PNP, 10A, 45V, TO-220	D45H4

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