Power Transistor

multicomp PRO

Description

Designed for use in general purpose amplifier and switching application.

RoHS Compliant



Features

- DC Current Gain -hFE = 30(Min)@ I_C= 0.3A
- Collector–Emitter Sustaining Voltage
  $V_{CEO(SUS)}$ = 60V(Min.)
- Complement to Type TIP42A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	
Emitter-Base Voltage	V_{EBO}	5	
Collector Current-Continuous	I_C	6	A
Collector Current-Peak	I_{CM}	10	
Base Current- Continuous	I_B	2	
Collector Power Dissipation @T_C=25°C	P_C	65	Watts
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 to +150	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Thermal Resistance Junction to Case	$R_{th\ j\text{-}c}$	1.67	°C/W

Electrical Characteristics (T_C = 25°C unless otherwise specified

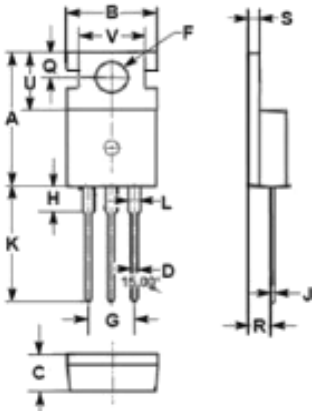
Characteristic	Symbol	Min.	Max.	Unit
Off Characteristics				
Collector-Emitter Sustaining Voltage (I_C= 10mA, I_B=0)	$V_{CEO(SUS)}$	60	-	V
Collector Cut-off Current (V_{CB}= 60V, I_E=0)	I_{CBO}		0.4	mA
Collector Cut-off Current (V_{CE}= 30V, I_B=0)	I_{CEO}		0.7	
Emitter Cut-off Current V_{EB}=5V, I_C=0	I_{EBO}		1	

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Characteristic		Symbol	Min.	Max.	Unit
On Characteristics					
DC Current Gain (Ic= 0.3A, V_{CE}=4A) (Ic= 3A, V_{CE}=4A)		h_{FE}	30 15	75	
Collector-Emitter Saturation Voltage I_C = 6.0 A, I_B = 600 mA)		$V_{CE(SAT)}$	-	1.5	V
Base-Emitter On Voltage (Ic= 6A, V_{CE}=4A)		$V_{BE(ON)}$	-	2	
DYNAMIC CHARATERISTICS					
Current gain-Bandwidth product I_C=0.5 A ,V_{CE} =10 V		f_T	3		MHz
Switching Charateristics					
Turn-on Time	$V_{BE(OFF)}$=4V, I_c=6A I_{B1}=-I_{B2}=0.6A, R_L=5Ω	t_{ON}	-	0.6	us
Turn-off Time		t_{OFF}	-	1	

Dimensions



PIN 1. Base
2. Collector
3. Emitter

Dim	Min.	Max.
A	15.5	15.9
B	9.8	10.2
C	4.2	4.5
D	0.7	0.9
F	3.4	3.7
G	4.98	5.18
H	2.68	2.9
J	0.44	0.6
K	12.8	13.4
L	1.2	1.45
O	2.7	2.9
R	2.3	2.7
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

Part Number Table

Description	Part Number
Transistor, NPN, 60V, 6A, 65W, TO-220	TIP41A.

Dimensions : Millimetres

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