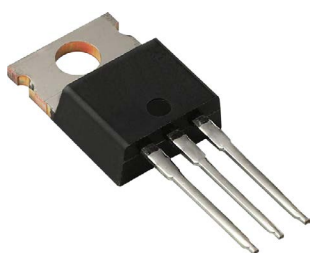


Description

Designed for use in automotive ignition, switching and motor control applications.

**RoHS
Compliant**



Features

- Collector-Emitter Breakdown Voltage
- $V_{(BR)CEO} = 400V(\text{Min.})$
- Collector Saturation Voltage
- $V_{CE(sat)} = 2.0V(\text{Max}) @ I_C = 5.0A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	400	V
Collector-Emitter Voltage	V_{CEO}	400	
Emitter-Base Voltage	V_{EBO}	8	
Collector Current-Continuous	I_C	7	A
Collector Current-Peak	I_{CM}	10	
Base Current- Continuous	I_B	1.5	
Total Power Dissipation @ $T_c = 25^\circ C$	P_C	80	Watts
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{STG}	-65 to +150	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Thermal Resistance Junction to Case	$R_{th\ j-c}$	1.56	$^\circ C/W$

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

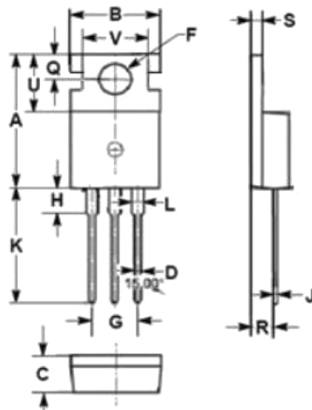
Characteristic	Symbol	Min.	Max.	Unit
Off Characteristics				
Collector-Emitter Breakdown Voltage ($I_C = 10mA, I_B = 0$)	V_{CEO}	400	-	V
Collector-Base Breakdown Voltage ($I_C = 1mA, I_E = 0$)	V_{CBO}	400	-	
Collector Cut-off Current ($V_{CE} = 400V, I_B = 0$)	I_{CEO}		0.25	mA
Emitter Cut-off Current $V_{EB} = 8V, I_C = 0$	I_{EBO}		15	

Darlington Transistor

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Characteristic	Symbol	Min.	Max.	Unit
On Characteristics				
DC Current Gain (Ic= 2.5A, VCE=5A) (Ic= 5A, VCE=5A) (Ic= 7A, VCE=5A)	hFE	150 50 15		
Collector-Emitter Saturation Voltage (Ic= 1A, VB=10mA) (Ic= 2A, VB=100mA) (Ic= 5A, VB=250mA)	VCE(SAT)	-	1.5 1.5 2.0	V
Base-Emitter Saturation Voltage (Ic= 2A, IB=100mA) (Ic= 5A, IB=250mA)	VBE(SAT)	-	2.2 2.3	
Diode Forward Voltage (IF= 7A)	VF		3.5	
DYNAMIC CHARATERISTICS				
Collector Output Capacitance (VCB=10 V, IE =0, f = 1.0 MHz)	Cob		150	pF

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
Darlington Transistor, NPN, 400V, 7A, 80W, TO-220	TIP152.

Dimensions : Millimetres

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