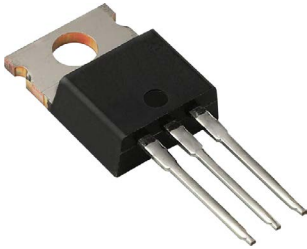


Description

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
- $V_{CE(\text{sat})} = 2.0V(\text{Max}) @ I_C = 5.0A$
- 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 @ $T_c = 25^\circ\text{C}$	P_C	80	Watts
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 to +150	

Thermal Characteristics

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

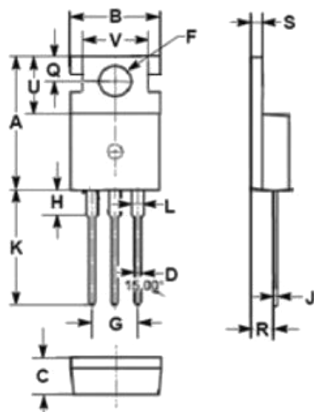
Electrical Characteristics ($T_c = 25^\circ\text{C}$ unless otherwise specified)

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

Darlington Transistor

Characteristic	Symbol	Min.	Max.	Unit
On Characteristics				
DC Current Gain ($I_C = 2.5A, V_{CE} = 5A$) ($I_C = 5A, V_{CE} = 5A$) ($I_C = 7A, V_{CE} = 5A$)	h_{FE}	150 50 15		
Collector-Emitter Saturation Voltage ($I_C = 1A, V_B = 10mA$) ($I_C = 2A, V_B = 100mA$) ($I_C = 5A, V_B = 250mA$)	$V_{CE(SAT)}$	-	1.5 1.5 2.0	V
Base-Emitter Saturation Voltage ($I_C = 2A, I_B = 100mA$) ($I_C = 5A, I_B = 250mA$)	$V_{BE(SAT)}$	-	2.2 2.3	
Diode Forward Voltage ($I_F = 7A$)	V_F		3.5	
DYNAMIC CHARACTERISTICS				
Collector Output Capacitance ($V_{CB} = 10V, I_E = 0, f = 1.0MHz$)	C_{ob}		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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