HIGH VOLTAGE FAST -SWITCHING NPN POWER TRANSISTOR

DESCRIPTION

This Device is designed for high voltage, High speed switching characteristics required such as compact electronic energy saving lamps , electronic ballast and mobile phone chargers power Switch circuit, is the core component of such electronic products.

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FEATURES

- Very High Switching Speed
- High Voltage Capability
- Wide Reverse Bias SOA
- Built-in freewheeling diode

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Test Conditions	Value	Unit
V_{CES}	Collector -Emitter Voltage	V_{BE}=0	700	V
V_{CEO}	Collector -Emitter voltage	I_B=0	400	V
V_{EBO}	Emitter-Bade Voltage	I_C=0	9.0	V
I_C	Collector Current		4.0	A
I_{CP}	Collector pulse Current		8.0	A
I_B	Base Current		2.0	
I_{BM}	Base Peak Current	t_P = 5ms	4.0	
P_C	Total dissipation at Tc=25℃		75	W
T_J	Operation Junction Temperature		150	℃
T_{STG}	Storage Temperature		-40~150	℃

ELECTRICAL CHARACTERISTICS(T_C=25℃ UNLESS OTHERWISE NOTED)

Symbol	Parameter	Test Conditions	Value			Units
			Min	Typ	Max	
I_{CEV}	Colletor Cut-off Current (V_{BE} = -1.5V)	V_{CE} = 700V V_{CE} = 700V ,T_C = 100℃	- -	- -	1.0 5.0	mA
V_{CEO}(sus)	Collector-Emitter Breakdown Voltage	Ic=10mA,Ib=0	400	-	-	V
V_{CE}(sat)	Collector -Emitter Saturation Voltage	Ic =1.0A, Ib = 0.2A Ic= 2.0A, Ib = 0.5A Ic= 4.0A, Ib = 1.0A	-	-	0.5 0.6 1.0	V
V_{BE}(sat)	Base -Emitter Saturation Voltage	Ic =1.0A, Ib = 0.2A Ic = 2.0A, Ib = 0.5A	-	-	1.2 1.6	V
h_{FE}	DC Current Gain	Ic = 1.0A, V_{CE} = 5V Ic = 2.0A, V_{CE} = 5V	10 10	-	40 30	
f_T	Characteristic frequency	Ic=0.5A ,V_{CE}=10V	4	-	-	MHz
V_F	Diode Forward Voltage	I_F=2A	-	-	2.5	V

Note: Pulse Test : Pulse width 300,Duty cycle 2%

THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
R_{thjc}	Thermal resistance, Junction to case	1.67	°C/W
R_{thja}	Thermal resistance, Junction to ambient	62.5	

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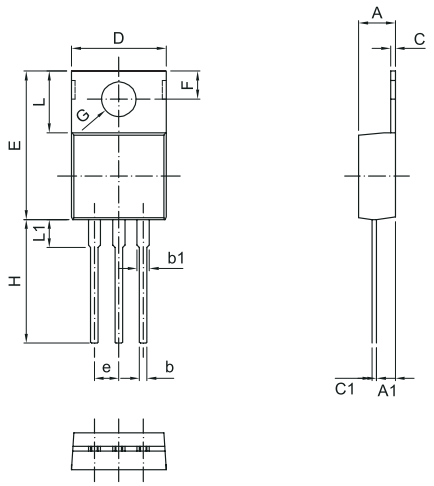

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.56	4.83	0.140	0.190
A1	2.03	2.92	0.080	0.115
b	0.38	1.02	0.015	0.040
b1	1.14	1.78	0.045	0.070
C	0.51	1.40	0.020	0.055
C1	0.36	0.61	0.014	0.024
D	9.65	10.67	0.380	0.420
E	14.22	16.51	0.560	0.650
e	2.54BSC		0.10BSC	
F	2.54	3.05	0.100	0.120
G	3.53	3.90	0.139	0.154
H	12.70	14.73	0.500	0.580
L	5.84	6.86	0.230	0.270
L1	-	6.35	-	0.250

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