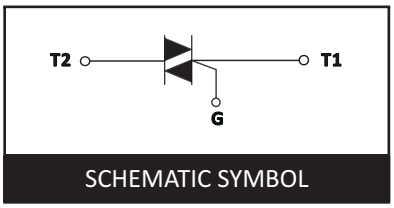
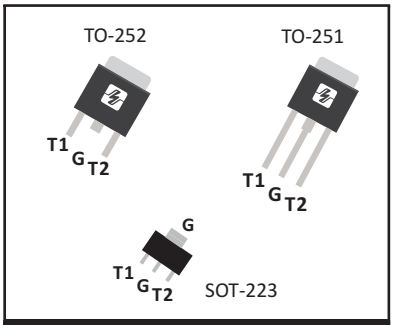
LOGIC LEVEL
BI-DIRECTIONAL TRIODE THYRISTOR



SCHEMATIC SYMBOL



PACKAGE

DESCRIPTION

General purpose switching and phase control applications .These devices are intended to be interfaced directly to microcontrollers , logic integrated circuits and other low power gate trigger circuits such as fan speed and temperature modulation control , lighting control and static switching relay.

FEATURES

- Repetitive Peak off-State Voltage: 600V
- R.M.S On-State Current($I_{T(RMS)}$=4.0A)
- Low on-state voltage: V_{TM}=1.7(typ.)@ I_{TM}
- Low reverse and forward blocking current:
- High Commutation dV/dt.

ABSOLUTE MAXIMUM RATINGS (T_J = 25°C UNLESS OTHERWISE SPECIFIED)

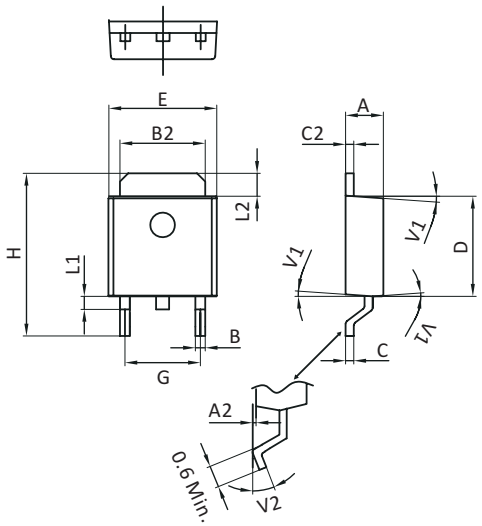
Symbol	Parameter	Condition	Ratings	Units
V_{DRM}	Repetitive Peak Off-State Voltage		600	V
V_{RRM}	Repetitive Peak Reverse Voltage		600	V
$I_{T(RMS)}$	R.M.S On-State Current	All Conduction Angle	4.0	A
I_{TSM}	Surge On-State Current	F=50Hz, tp=20ms	25	A
I^2t	I^2t for Fusing	tp= 10ms	3.10	A^2S
dI/dt	Repetitive rate of rise of on-state current after triggering	I_T=6A I_G=0.2A dI_G/dt=0.2A/uS Ⅰ Ⅱ Ⅲ Ⅳ	50 50 50 10	A/uS
P_{GM}	Forward Peak Gate Power Dissipation		5.0	W
$P_{G(AV)}$	Forward Average Gate Power Dissipation		0.5	W
I_{GM}	Peak Gate Current		2.0	A
T_J	Operating Junction Temperature		-40~125	°C
T_{STG}	Storage Temperature		-40~150	°C

ELECTRICAL CHARACTERISTICS (TC = 25 °C UNLESS OTHERWISE NOTED)

Symbol	Items	Conditions		Ratings			Unit
				Min.	Typ.	Max.	
I_{DRM}	Repetitive Peak Off-State Current	$V_D = V_{DRM}$	T_C = 25 °C	—	—	10	uA
			T_C = 125 °C	—	—	500	
V_{TM}	Peak On-State Voltage	I_{TM} = 2.0A		—	—	1.7	V
I_{GT}	Gate Trigger Current	V_D = 12V	Ⅰ Ⅱ Ⅲ	—	—	10	mA
			Ⅳ	—	—	25	
V_{GT}	Gate Trigger Voltage	V_D=12V		—	—	1.5	V
V_{GD}	Non-Trigger Gate Voltage	V_D =2/3V_{DRM}, T_J = 125°C		0.2	—	—	V
dv/dt	Critical Rate of Rise Off-State Voltage	V_D = 2/3V_{DRM}, T_J = 125°C		5.0	—	—	V/uS
I_H	Holding Current	I_T =0.1A		—	—	15	mA
I_L	Latching current	I_G=1.2I_{GT}	Ⅰ Ⅲ Ⅳ	—	—	15	mA
			Ⅱ	—	—	20	

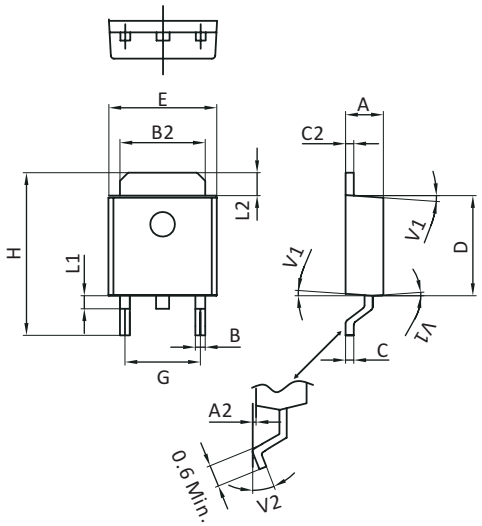
PACKAGE MECHANICAL DATA

TO-252(DPAK)



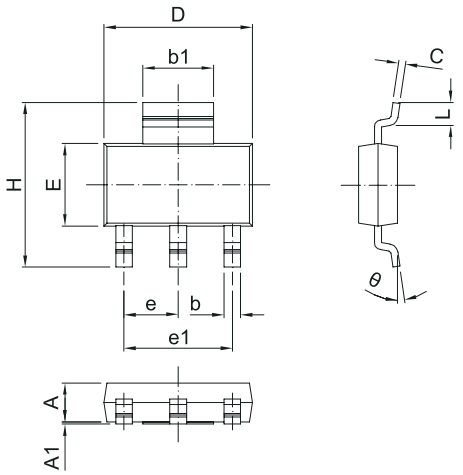
Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.40	0.086	0.095
A2	0.03	0.23	0.001	0.009
B	0.55	0.65	0.021	0.026
B2	5.10	5.40	0.200	0.212
C	0.45	0.62	0.017	0.024
C2	0.48	0.62	0.019	0.024
D	6.00	6.20	0.236	0.244
E	6.40	6.70	0.252	0.264
G	4.40	4.70	0.173	0.185
H	9.35	10.10	0.368	0.397
L1	0.80TYP		0.031TYP	
L2	1.37	1.50	0.05	0.06
V1	4° TYP		4° TYP	
V2	0°	8°	0°	8°

TO-252(DPAK)



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.40	0.086	0.095
A2	0.03	0.23	0.001	0.009
B	0.55	0.65	0.021	0.026
B2	5.10	5.40	0.200	0.212
C	0.45	0.62	0.017	0.024
C2	0.48	0.62	0.019	0.024
D	6.00	6.20	0.236	0.244
E	6.40	6.70	0.252	0.264
G	4.40	4.70	0.173	0.185
H	9.35	10.10	0.368	0.397
L1	0.80TYP		0.031TYP	
L2	1.37	1.50	0.05	0.06
V1	4° TYP		4° TYP	
V2	0°	8°	0°	8°

SOT-223



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.5TYP	1.70	0.059TYP	0.067
A1	-	0.10	-	0.004
b	0.60	0.82	0.024	0.032
b1	2.90	3.10	0.114	0.122
C	0.24	0.35	0.009	0.014
D	6.15	6.65	0.242	0.262
E	3.30	3.70	0.130	0.146
e	2.3TYP		0.091TYP	
e1	4.50	4.70	0.177	0.185
H	6.70	7.30	0.264	0.287
L	0.80	1.15	0.031	0.045
F	0°	10°	0°	10°

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