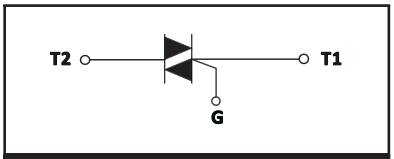
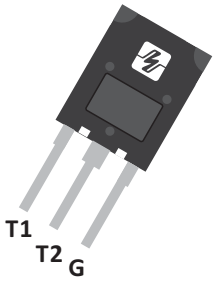
60A SERIES
BI-DIRECTIONAL TRIODE THYRISTOR



SCHEMATIC SYMBOL

TO-247



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/800V/1200V/1600V
- R.M.S On-State Current($I_{T(RMS)}$=60A)
- Low on-state voltage: V_{TM}=1.55(Max.)@ I_{TM}
- Low reverse and forward blocking current:
- High Commutation dV/dt.

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

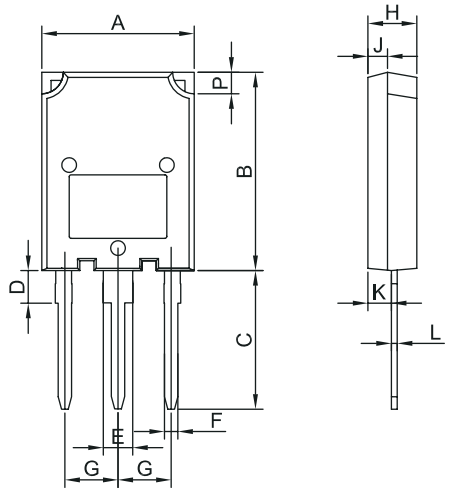
Symbol	Parameter	Condition	Ratings	Units
V_{DRM}	Repetitive Peak Off-State Voltage		600/800/1200/1600	V
V_{RRM}	Repetitive Peak Reverse Voltage		600/800/1200/1600	V
$I_{T(RMS)}$	R.M.S On-State Current	All Conduction Angle	60	A
I_{TSM}	Surge On-State Current	F=50Hz, tp=20ms	600	A
I^2t	I^2t for Fusing	tp= 10ms	1500	A^2S
dI/dt	Repetitive rate of rise of on-state current after triggering	I_G=2I_{GT} F=100Hz tr≤100nS	50	A/uS
P_{GM}	Forward Peak Gate Power Dissipation		5.0	W
$P_{G(AV)}$	Forward Average Gate Power Dissipation		1.0	W
I_{GM}	Peak Gate Current		8.0	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
I_{DRM}	Repetitive Peak Off-State Current	$V_D = V_{DRM}$	T_C = 25 °C	≤50	uA
			T_C = 125 °C	≤10000	
V_{TM}	Peak On-State Voltage	I_{TM} = 78A		≤1.55	V
I_{GT}	Gate Trigger Current	V_D = 12V	Ⅰ Ⅱ Ⅲ	≤50	mA
			Ⅳ	-	
V_{GT}	Gate Trigger Voltage	V_D=12V		≤1.3	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	$_{DRM}$, V_D = 2/3V T_J = 125°C		≥500	V/uS
I_H	Holding Current	I_T =0.1A		≤80	mA
I_L	Latching current	I_G=1.2I_{GT}	Ⅰ Ⅲ	≤70	mA
			Ⅱ	≤160	

PACKAGE MECHANICAL DATA

TO-247



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	15.10	16.10	0.595	0.632
B	19.80	20.80	0.780	0.818
C	13.80	14.80	0.544	0.582
D	3.00	4.00	0.118	0.157
E	2.75	3.35	0.108	0.132
F	1.30	1.50	0.051	0.059
G	5.10	5.80	0.201	0.228
H	4.50	5.50	0.178	0.216
J	1.45	2.15	0.058	0.084
K	1.90	2.80	0.075	0.110
L	0.55	0.80	0.022	0.032
P	2.00	2.40	0.079	0.095

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