

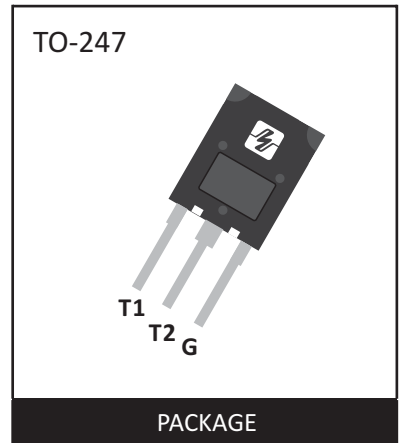
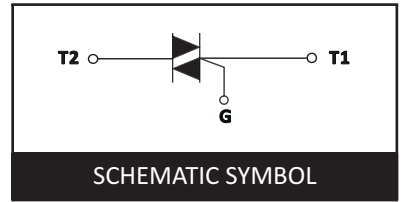
60A SERIES BI-DIRECTIONAL TRIODE THYRISTOR

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 ($T_J = 25^{\circ}C$ 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	$F=50Hz, t_p=20ms$	600	A
I^2t	I^2t for Fusing	$t_p=10ms$	1500	A^2S
dI/dt	Repetitive rate of rise of on-state current after triggering	$I_G=2I_{GT} F=100Hz tr \leq 100ns$	50	A/ μS
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	$^{\circ}C$
T_{STG}	Storage Temperature		-40~150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS ($T_C = 25\text{ }^\circ\text{C}$ UNLESS OTHERWISE NOTED)

Symbol	Items	Conditions		Ratings	Unit
I_{DRM}	Repetitive Peak Off-State Current	$V_D = V_{DRM}$	$T_C = 25\text{ }^\circ\text{C}$	≤ 50	μA
			$T_C = 125\text{ }^\circ\text{C}$	≤ 10000	
V_{TM}	Peak On-State Voltage	$I_{TM} = 78\text{A}$		≤ 1.55	V
I_{GT}	Gate Trigger Current	$V_D = 12\text{V}$	I II III	≤ 50	mA
			IV	-	
V_{GT}	Gate Trigger Voltage	$V_D = 12\text{V}$		≤ 1.3	V
V_{GD}	Non-Trigger Gate Voltage	$V_D = 2/3V_{DRM}, T_J = 125\text{ }^\circ\text{C}$		≥ 0.2	V
dv/dt	Critical Rate of Rise Off-State Voltage	$I_{DRM}, V_D = 2/3V, T_J = 125\text{ }^\circ\text{C}$		≥ 500	V/ μS
I_H	Holding Current	$I_T = 0.1\text{A}$		≤ 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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