

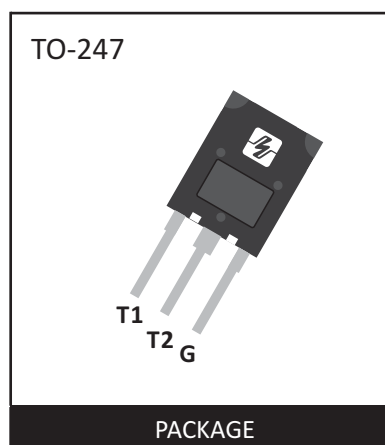
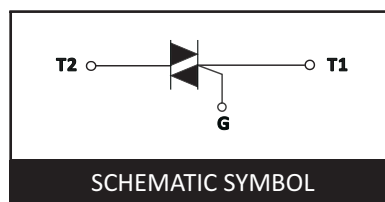
100A SERIES BI-DIRECTIONAL TRIODE THYRISTOR

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($I_{T(RMS)}$)=100A)
- Low on-state voltage: $V_{TM}=1.55(\text{Max.})@ I_{TM}$
- Low reverse and forward blocking current:
- High Commutation dV/dt .



ABSOLUTE MAXIMUM RATINGS ($T_J = 25^{\circ}\text{C}$ 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	100	A
I_{TSM}	Surge OnState Current	$F=50\text{Hz}$, $t_p=20\text{ms}$	1000	A
I^2t	I^2t for Fusing	$t_p=10\text{ms}$	2100	A^2S
dI/dt	Repetitive rate of rise of on-state current after triggering	$I_G=2I_{GT}$ $F=100\text{Hz}$ $t_r \leq 100\text{ns}$	50	$\text{A}/\mu\text{S}$
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		$-40 \sim 125$	$^{\circ}\text{C}$
T_{STG}	Storage Temperature		$-40 \sim 150$	$^{\circ}\text{C}$

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	$I_{TM} = 120\text{A}$		≤ 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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