

# TRIACs, 60A

## Snubberless

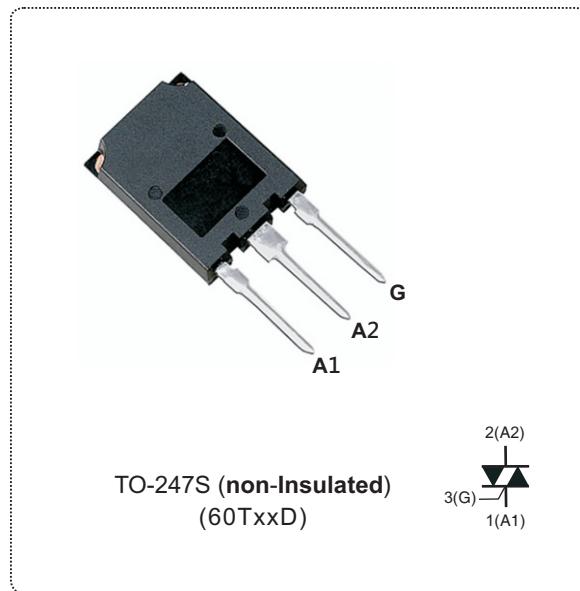
### FEATURES

- High current triac
- Low thermal resistance with clip bonding
- Low thermal resistance for TO-247S (Super TO-247) package
- High commutation capability
- 60T series are **UL** certified (File ref: E320098)
- Packages are RoHS compliant

### APPLICATIONS

The snubberless concept offer suppression of RC network and it is suitable for applications such as on/off function in static relays, heating regulation, induction motor starting circuits, phase control operation in light dimmers, motor speed controllers, and similar.

Due to their clip assembly technique, they provide a superior performance in surge current handling capabilities.



### MAIN FEATURES

SYMBOL	VALUE	UNIT
$I_{T(RMS)}$	60	A
$V_{DRM}/V_{RRM}$	1000 to 1600	V
$I_{GT(Q1)}$	35 to 50	mA

ABSOLUTE MAXIMUM RATINGS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUE	UNIT
RMS on-state current (full sine wave)	$I_{T(RMS)}$		$T_c = 72^\circ C$	60	A
Non repetitive surge peak on-state current (full cycle, $T_j$ initial = $25^\circ C$ )	$I_{TSM}$	$F = 50 \text{ Hz}$	$t = 10 \text{ ms}$	600	A
		$F = 60 \text{ Hz}$	$t = 8.3 \text{ ms}$	628	
$I^2t$ Value for fusing	$I^2t$	$t_p = 10 \text{ ms}$	$t = 10 \text{ ms}$	1800	$\text{A}^2\text{s}$
Critical rate of rise of on-state current $I_G = 2xI_{GT}$ , $t_r \leq 100\text{ns}$	$dI/dt$	$F = 120 \text{ Hz}$ , $I_G = 2xI_{GT}$ , $t_r \leq 100\text{ns}$	$T_j = 125^\circ C$	100	$\text{A}/\mu\text{s}$
Peak gate current	$I_{GM}$	$T_p = 20 \mu\text{s}$	$T_j = 125^\circ C$	8	A
Peak gate power dissipation	$P_{GM}$	$T_p = 20 \mu\text{s}$	$T_j = 125^\circ C$	10	W
Average gate power dissipation	$P_{G(AV)}$		$T_j = 125^\circ C$	2	
Storage temperature range	$T_{stg}$		$-40 \text{ to } +150$		$^\circ C$
Operating junction temperature range	$T_j$		$-40 \text{ to } +125$		



### ORDERING INFORMATION SCHEME

60 T 12 D - BW

**Current**  
60 = 60A

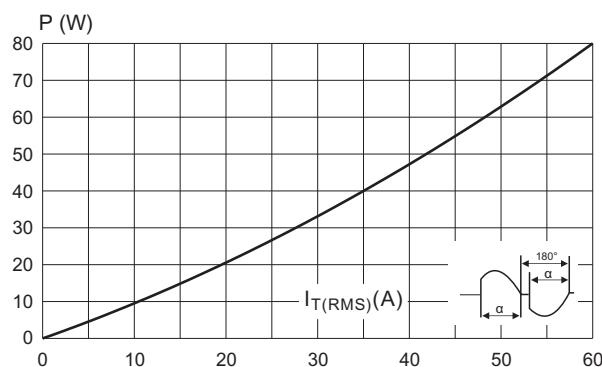
**Triac series**

**Voltage**  
10 = 1000V  
12 = 1200V  
16 = 1600V

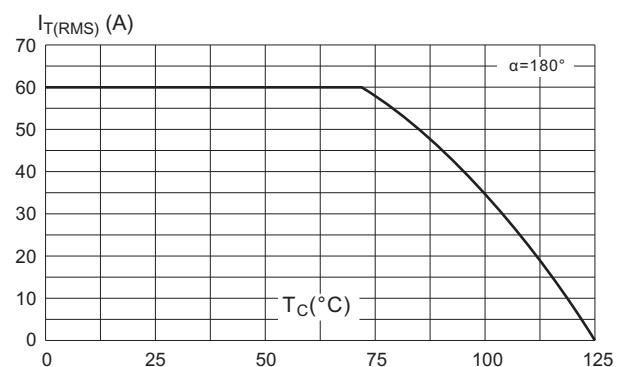
**Package type**  
D = TO-247S (non-insulated), Super TO-247

**IGT Sensitivity**  
BW = 50mA Snubberless

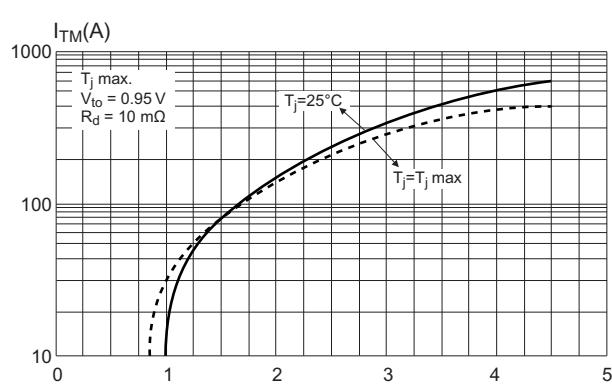
**Fig.1 Maximum power dissipation versus on-state RMS current (full cycle)**



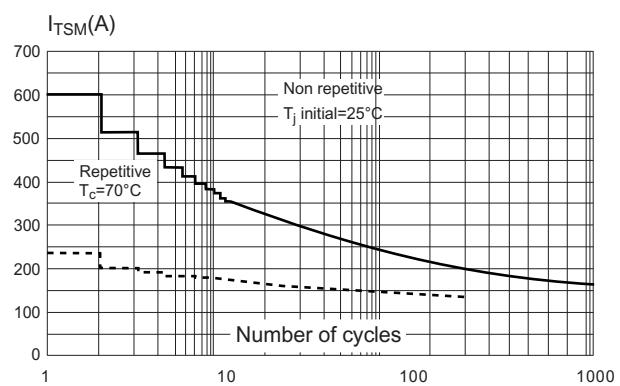
**Fig.2 On-state rms current versus case temperature (full cycle)**



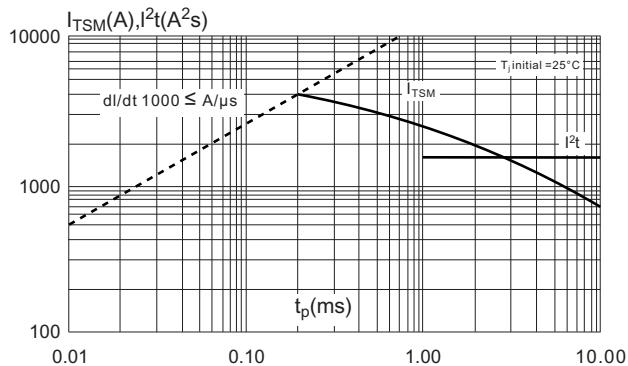
**Fig.3 On-state characteristics (maximum values).**



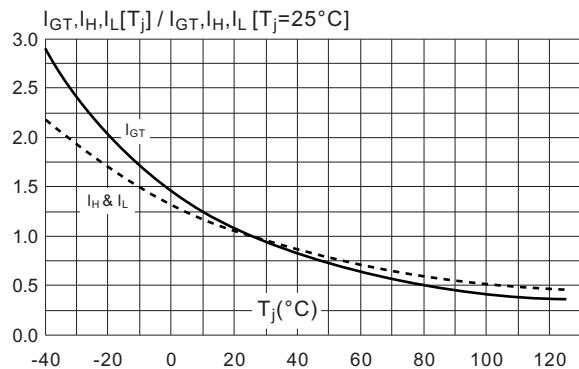
**Fig.4 Surge peak on-state current versus number of cycles.**



**Fig.5 Non-repetitive surge peak on-state current for a sinusoidal pulse and corresponding value of  $I^2t$ .**



**Fig.6 Relative variation of gate trigger, holding and latching current versus junction temperature (typical values)**



## Case Style

