



JST60CS-1600BW 60A TRIACs

Rev.1

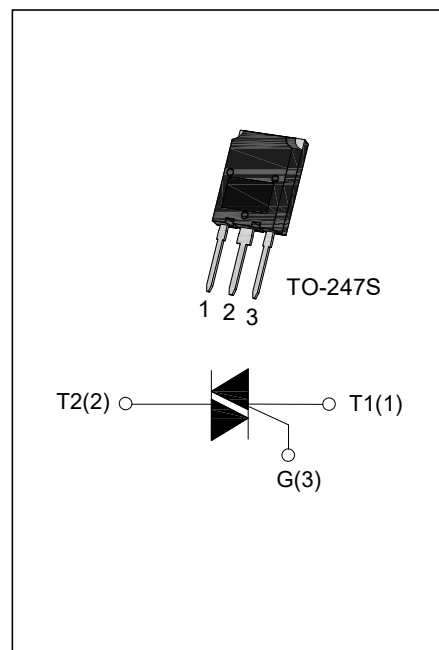
DESCRIPTION:

JST60CS-1600BW triacs provide good commutation capability, which is suitable for general purpose AC switching and voltage regulation, and can be used in static relays, heating regulation, induction motor starting circuits.

Packages TO-247S is RoHS compliant.
(2011/65/EU)

MAIN FEATURES

Symbol	Value	Unit
V_{DRM}/V_{RRM}	1600	V
$I_{T(RMS)}$	60	A
I_{GT1-3}	≤ 50	mA



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	$^{\circ}C$
Operating junction temperature range	T_j	-40-125	$^{\circ}C$
Repetitive peak off-state voltage ($T_j=25^{\circ}C$)	V_{DRM}	1600	V
Repetitive peak reverse voltage ($T_j=25^{\circ}C$)	V_{RRM}	1600	V
RMS on-state current	$I_{T(RMS)}$	60	A
TO-247S ($T_C=75^{\circ}C$)			
Non repetitive surge peak on-state current ($t_p=20ms$)	I_{TSM}	600	A
I^2t value for fusing ($t_p=10ms$)	I^2t	1800	A^2s
Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$)	di/dt	100	$A/\mu s$
Peak gate current	I_{GM}	8	A
Average gate power dissipation	$P_{G(AV)}$	2	W
Peak gate power	P_{GM}	10	W

ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value	Unit
I_{GT}	$V_D=12\text{V } R_L=33\Omega$	I - II -III	MAX	50	mA
V_{GT}		I - II -III	MAX	1.3	V
V_{GD}	$V_D=V_{DRM} T_j=125^{\circ}\text{C}$ $R_L=3.3\text{K}\Omega$	I - II -III	MIN	0.2	V
I_L	$I_G=1.2I_{GT}$	I - II -III	MAX	120	mA
I_H	$I_T=100\text{mA}$		MAX	80	mA
dv/dt	$V_D=2/3V_{DRM} T_j=125^{\circ}\text{C}$ Gate Open		MIN	1500	V/ μs

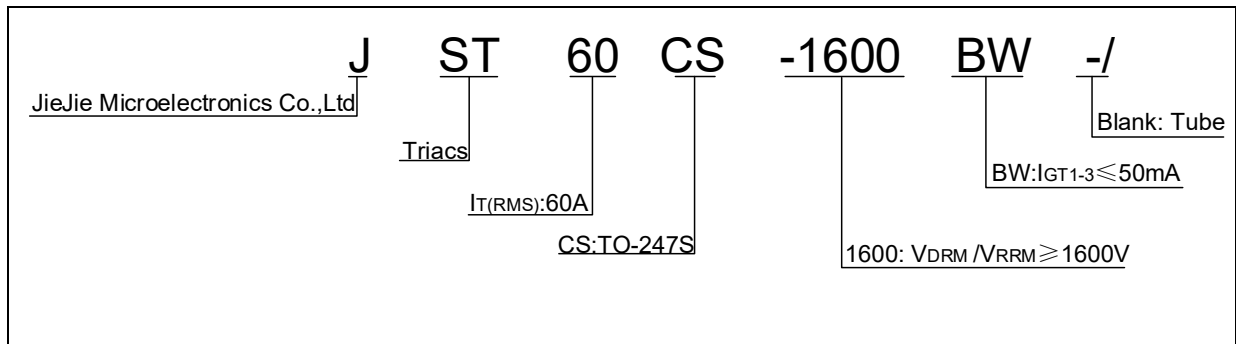
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=80\text{A } t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.7	V
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	20	μA
I_{RRM}		$T_j=125^{\circ}\text{C}$	8	mA

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-247S	0.47	$^{\circ}\text{C}/\text{W}$

ORDERING INFORMATION



MARKING

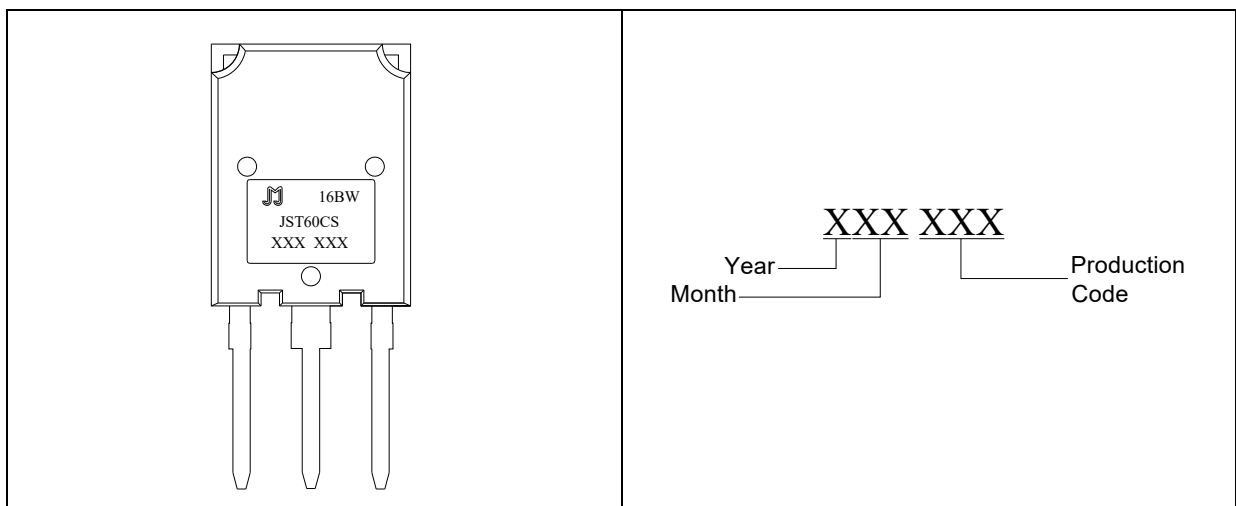


FIG.1: Maximum power dissipation versus RMS on-state current

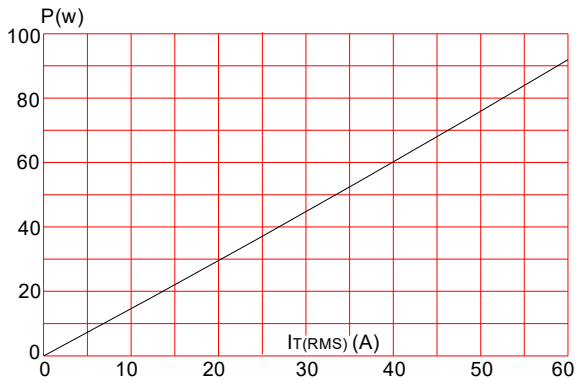


FIG.2: RMS on-state current versus case temperature

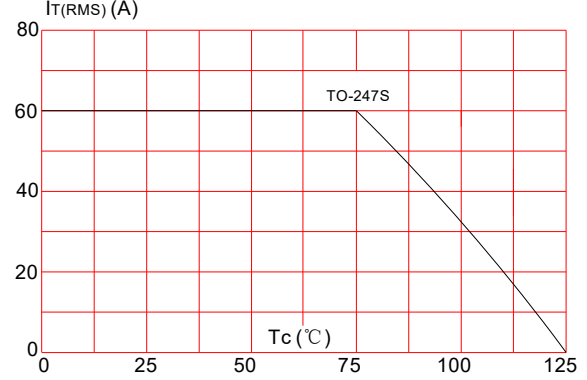


FIG.3: Surge peak on-state current versus number of cycles

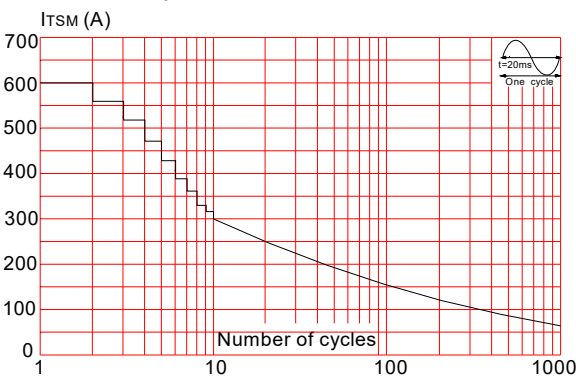


FIG.4: On-state characteristics (maximum values)

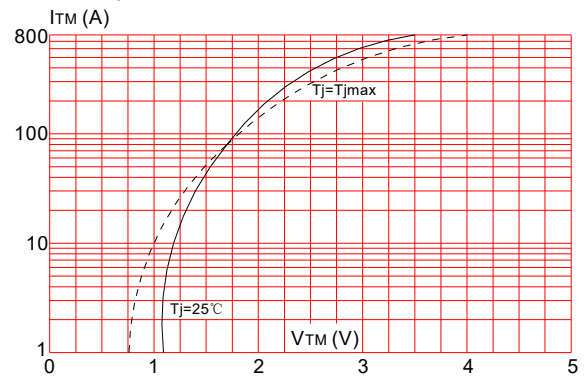


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20ms$, and corresponding value of I^2t ($di/dt < 100A/\mu s$)

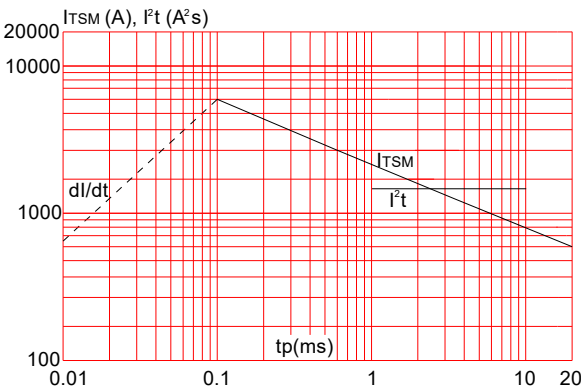
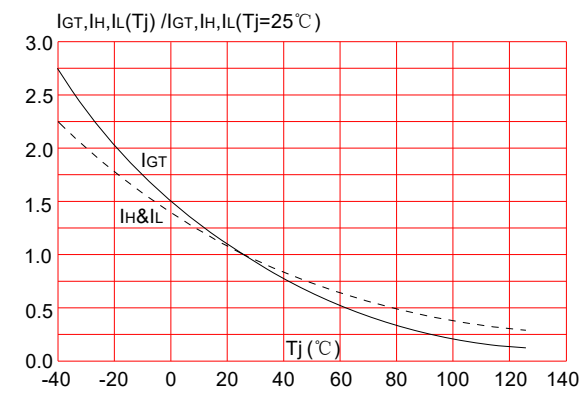


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



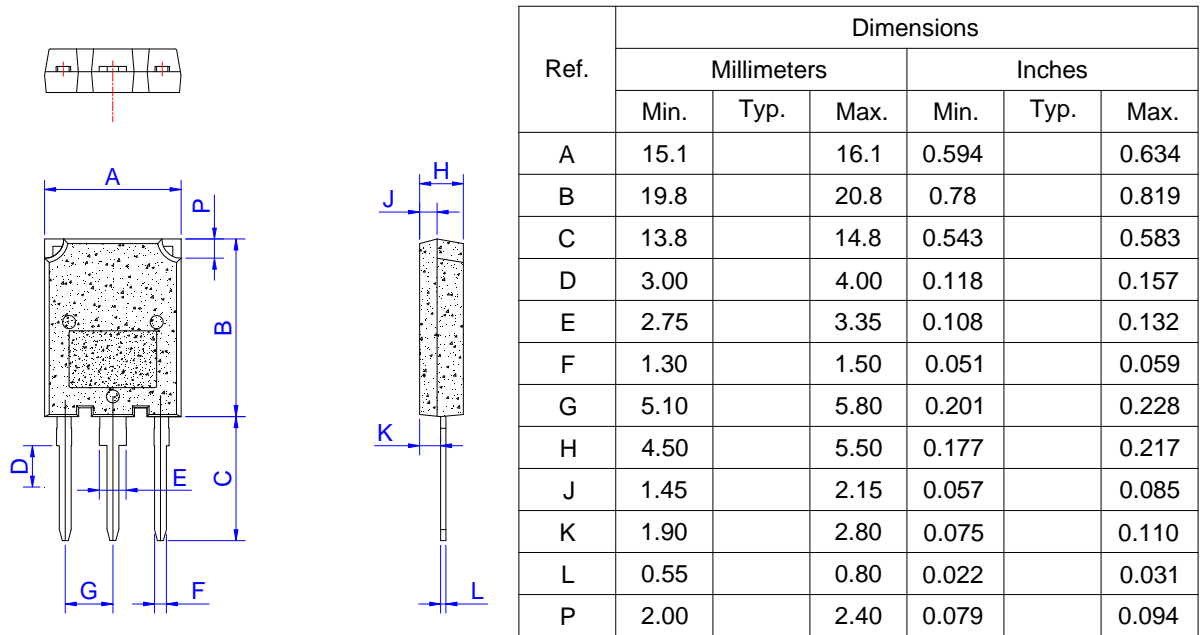
ORDERING INFORMATION

Order code	Voltage V_{DRM}/V_{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
JST60CS-1600BW	1600	50	TO-247S	30	Tube

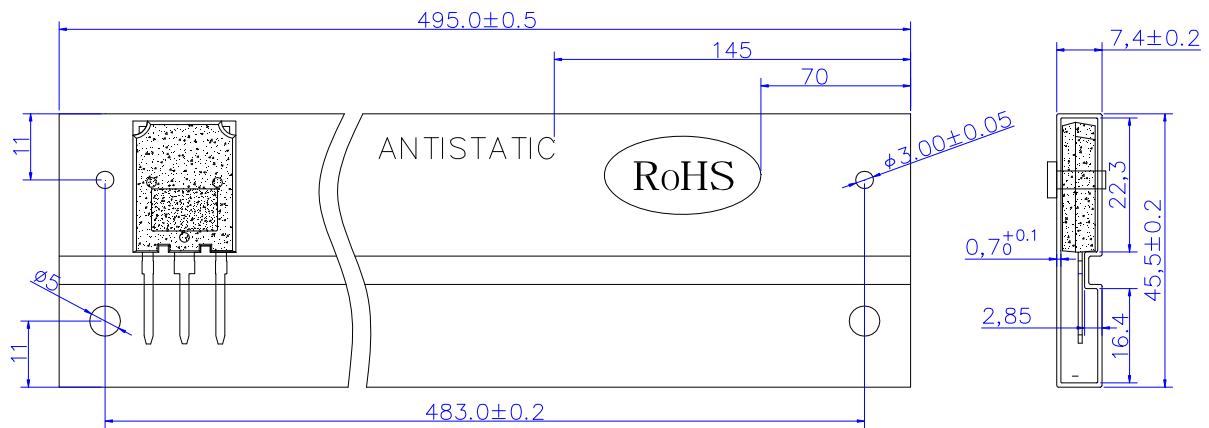
Document Revision History

Date	Revision	Changes
Mar 18, 2022	1	Last update

PACKAGE MECHANICAL DATA



DELIVERY MODE



PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-247S	TUBE	30	450	2,250



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