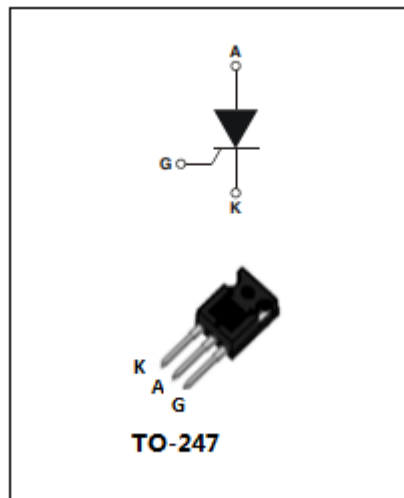


**DESCRIPTION:**

Glass passivated thyristors in a plastic envelope, The YZPST-S16040SCRs series is suitable to fit all modes of control, found in applications such as solid state relays and controlled rectifier circuits...


**MAIN FEATURES**

Symbol	Value	Unit
$I_{T(RMS)}$	160	A
$V_{DRM} V_{RRM}$	1200	V
$I_{GT}$	5-40	mA

**ABSOLUTE MAXIMUM RATINGS**

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40 ~150	°C
Operating junction temperature range	$T_j$	-40~125	°C
Repetitive peak off-state voltage (T =25°C)	$V_{DRM}$	1200	V
Repetitive peak reverse voltage (T =25°C)	$V_{RRM}$	1200	V
Non repetitive surge peak Off-state voltage	$V_{DSM}$	$V_{DRM} +100$	V
Non repetitive peak reverse voltage	$V_{RSM}$	$V_{RRM} +100$	V
RMS on-state current (T =100°C)	$I_{T(RMS)}$	160	A
Non repetitive surge peak on-state current	$I_{TSM}$	1100	A
Average on-state current (180 °conduction angle)	$I_{T(AV)}$	100	A
$I^2t$ value for fusing (tp=10ms)	$I^2t$	6050	A <sup>2</sup> S
Critical rate of rise of on-state current ( $I =2 \times I_{GT}$ , $t_r \leq 100$ ns)	dI/dt	150	A/μS
Peak gate current	$I_{GM}$	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W

**ELECTRICAL CHARACTERISTICS (T=25°C unless otherwise specified)**

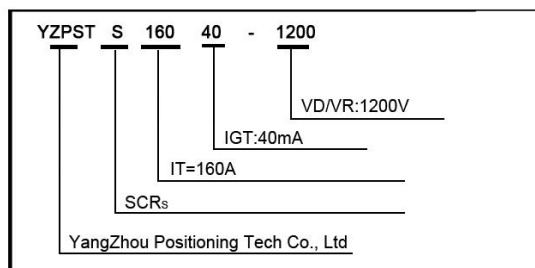
Symbol	Test Condition		Value	Unit
$I_{GT}$	$V = 12V R = 140\Omega$	MAX.	40	mA
$V_{GT}$		MAX.	1.5	V
$V_{GD}$	$V_D = V_{DRM} T_j = 125^\circ C R = 1K\Omega$	MIN.	0.2	V
$I_L$	$I_G = 1.2I_{GT}$	MAX.	150	mA
$I_H$	$I_T = 50mA$	MAX.	100	mA
dV/dt	$V_D = 2/3V_{DRM}$ Gate Open $T_j = 125^\circ C$	MIN.	800	V/ $\mu s$

**STATIC CHARACTERISTICS**

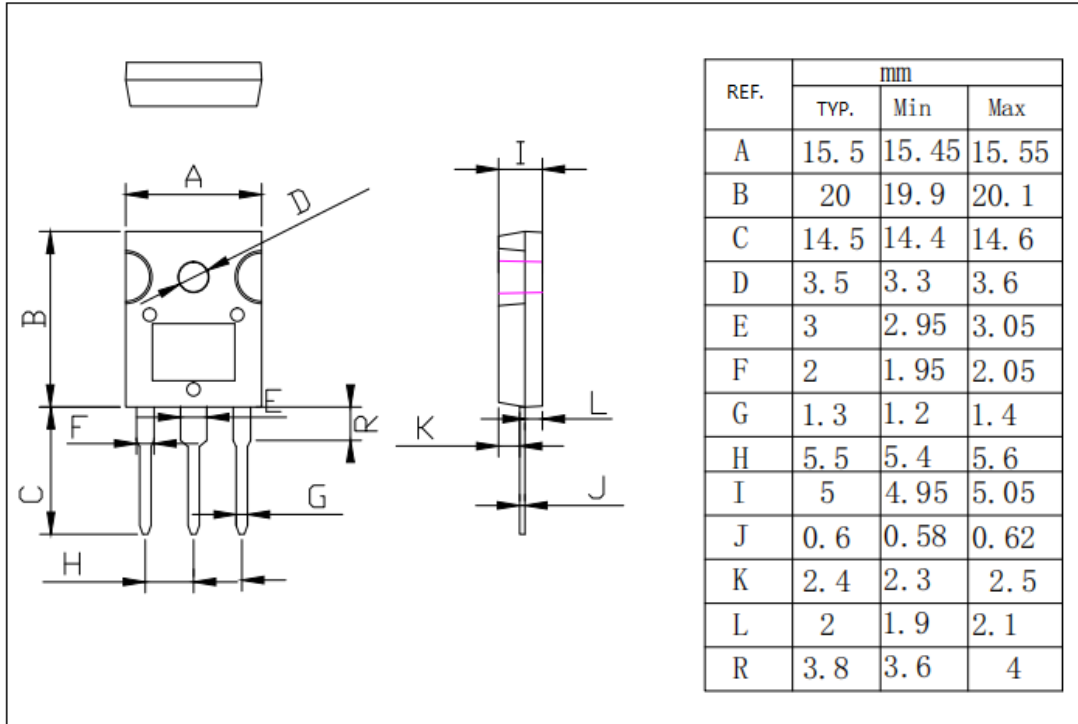
Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM} = 100A t_p = 380\mu s$	$T_j = 25^\circ C$	1.45	V
$I_{DRM}$	$V_D = V_{DRM} V_R = V_{RRM}$	$T_j = 25^\circ C$	50	$\mu A$
$I_{RRM}$		$T_j = 125^\circ C$	5	mA

**Thermal Resistances**

Symbol	Parameter	Value(MAX.)	Unit
Rth(j-a)	junction to ambient(DC)	25	$^\circ C/W$
Rth(j-c)	Junction to case (DC)	0.3	

**Ordering information scheme**


TO-247 Package Mechanical Data



®

Tel: +86-514-87782298, 87782296      FAX: +86-514-87782297, 87367519

E-mail: [positioning@china.com](mailto:positioning@china.com); [info@yzpst.com](mailto:info@yzpst.com); [info@stt.tm](mailto:info@stt.tm); [info@goldstar.tm](mailto:info@goldstar.tm)

Web Site: [www.yzpst.com](http://www.yzpst.com) [www.stt.tm](http://www.stt.tm) [www.goldstar.tm](http://www.goldstar.tm) [www.Pst888.com](http://www.Pst888.com)

[www.positioning.en.alibaba.com](http://www.positioning.en.alibaba.com) [www.pst.manufacturer.globalsources.com](http://www.pst.manufacturer.globalsources.com)

FIG.1 power dissipation versus Average RMS on-state current

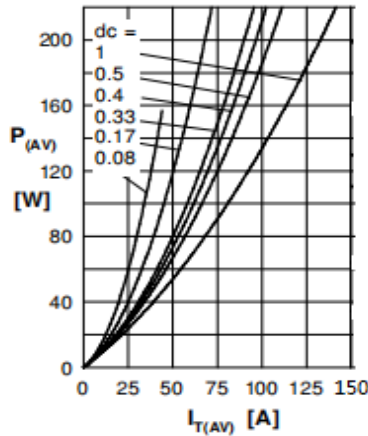


FIG.2: Average on-state current versus case temperature

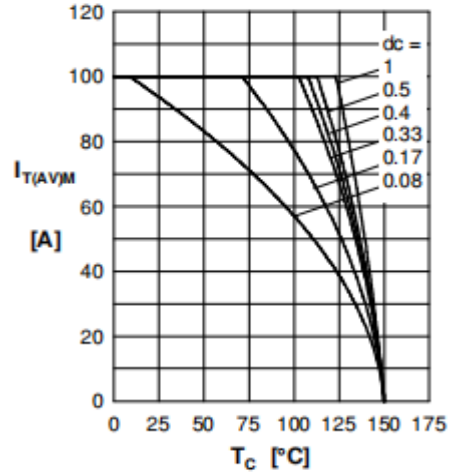


FIG.3: Surge overload current

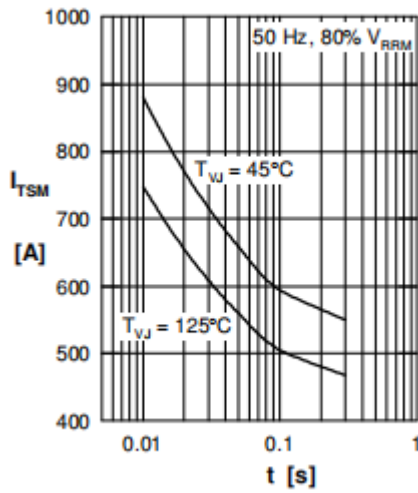


FIG.4: On-state characteristics (maximum values)

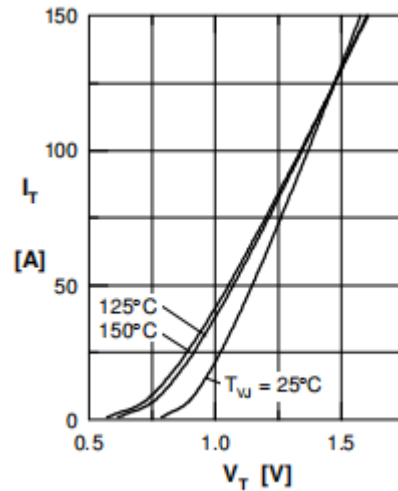


FIG.5: Relative variations of gate trigger current holding current and latching current versus junction temperature

