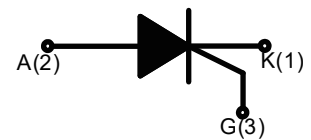
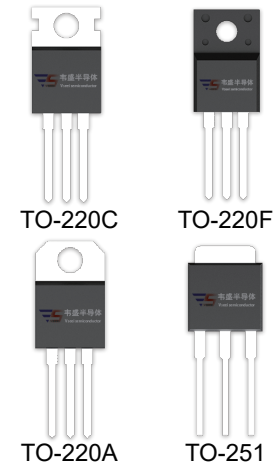


## DESCRIPTION:

With high ability to withstand the shock loading of large current, TYN16X-800RT series of silicon controlled rectifiers provide high dv/dt rate with strong resistance to electromagnetic interference. They are especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc.



## MAIN FEATURES

Symbol	JCT616	JCT816
$V_{DRM}/V_{RRM}$	600V	800V
$I_{T(RMS)}$	16A	
$I_{GT}$	$\leq 15mA$	

## ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		$T_{stg}$	-40-150	$^{\circ}C$
Operating junction temperature range		$T_j$	-40-150	$^{\circ}C$
Repetitive peak off-state voltage( $T_j=25^{\circ}C$ )		$V_{DRM}$	600/800	V
Repetitive peak reverse voltage( $T_j=25^{\circ}C$ )		$V_{RRM}$	600/800	V
RMS on-state current	TO-220A(Ins) / TO-220F(Ins) ( $T_c=100^{\circ}C$ )	$I_{T(RMS)}$	16	A
	TO-251/ TO-220C TO-220A(Non-Ins) ( $T_c=120^{\circ}C$ )			

Non repetitive surge peak on-state current (tp=10ms)	$I_{TSM}$	180	A
$I^2t$ value for fusing (tp=10ms)	$I^2t$	162	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ )	$di/dt$	50	$A/\mu s$
Peak gate current	$I_{GM}$	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W
Peak gate power	$P_{GM}$	5	W

**ELECTRICAL CHARACTERISTICS** ( $T_j=25^\circ C$  unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V$ $R_L=33\Omega$	-	-	15	mA
$V_{GT}$		-	-	1.3	V
$V_{GD}$	$V_D=V_{DRM}$ $T_j=150^\circ C$ $R_L=3.3K\Omega$	0.2	-	-	V
$I_L$	$I_G=1.2I_{GT}$	-	-	60	mA
$I_H$	$I_T=500mA$	-	-	50	mA
$dV/dt$	$V_D=2/3V_{DRM}$ Gate Open $T_j=150^\circ C$	200	-	-	$V/\mu s$

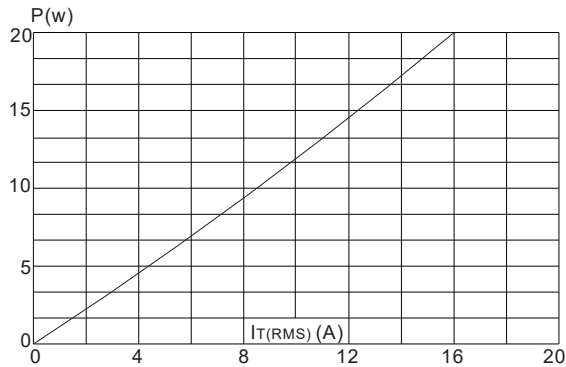
**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX)	Unit
$V_{TM}$	$I_{TM}=32A$ $tp=380\mu s$	$T_j=25^\circ C$	1.55	V
$I_{DRM}$	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ C$	5	$\mu A$
$I_{RRM}$		$T_j=150^\circ C$	2	mA

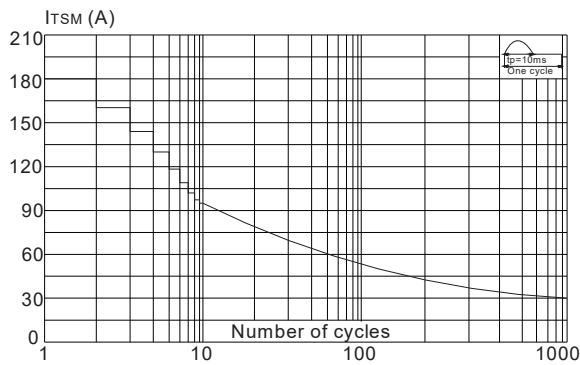
**THERMAL RESISTANCES**

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-220A(Ins)/ TO-220F(Ins)	2.4	$^\circ C/W$
		TO-220A(Non-Ins) TO-220C	1.1	
		TO-251	1.4	

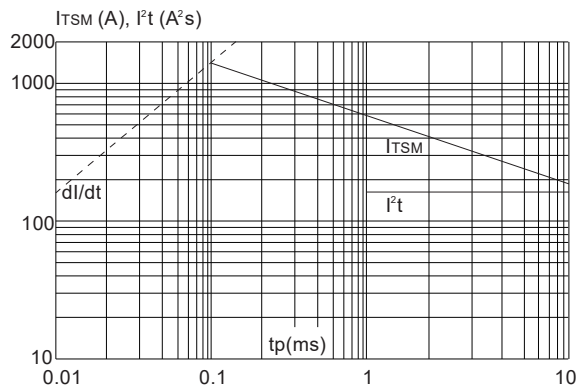
**FIG.1** Maximum power dissipation versus RMS on-state current



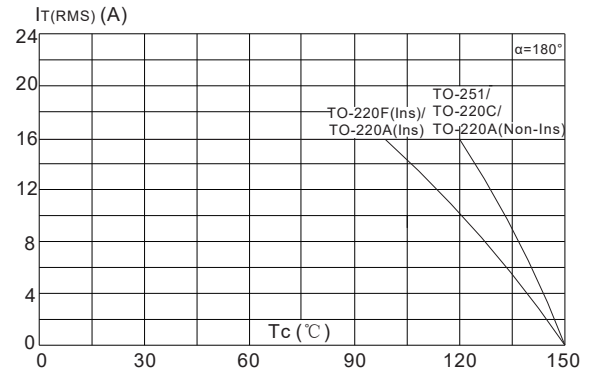
**FIG.3:** Surge peak on-state current versus number of cycles



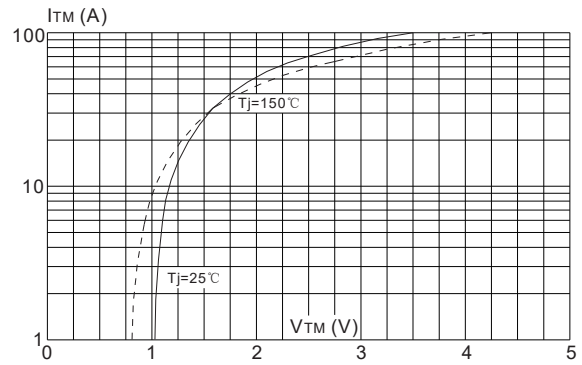
**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 10\text{ms}$ , and corresponding value of  $I^2t$  ( $dI/dt < 50\text{A}/\mu\text{s}$ )



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



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



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

