



**PRODUCT NAME : TYN412RG 8A 400V SCR**

**PRICE : Rs 35.00**

**SKU : RM1965**



## DESCRIPTION

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## Features

- Gate Turn-On Voltage (Vgt): 1.5V
- Peak Off-State Voltage(Vdrm): 400V
- On-State Current (It): 8.0A
- Gate Current (Igt): 15mA
- Typical Voltage Change over Time (dV/dT): 200V/μs



**TXN/TYN 0512 --->  
 TXN/TYN 1012**

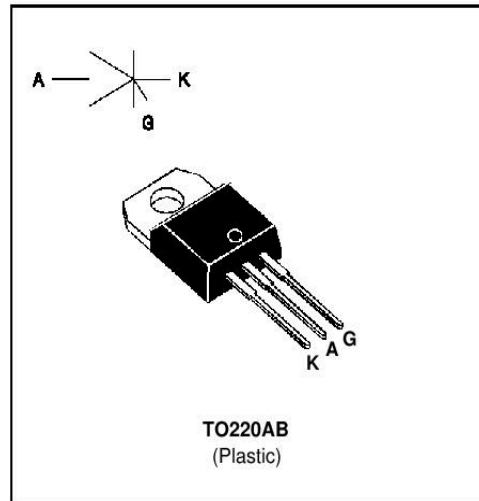
SCR

**FEATURES**

- HIGH SURGE CAPABILITY
- HIGH ON-STATE CURRENT
- HIGH STABILITY AND RELIABILITY
- TXN Serie :  
 INSULATED VOLTAGE = 2500V<sub>(RMS)</sub>  
 (UL RECOGNIZED : E81734)

**DESCRIPTION**

The TYN/TXN 0512 ---> TYN/TXN 1012 Family of Silicon Controlled Rectifiers uses a high performance glass passivated technology. This general purpose Family of Silicon Controlled Rectifiers is designed for power supplies up to 400Hz on resistive or inductive load.



**ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter	Value	Unit
$I_T(RMS)$	RMS on-state current (180° conduction angle)	TXN Tc=80°C TYN Tc=90°C	12 A
$I_T(AV)$	Average on-state current (180° conduction angle, single phase circuit)	TXN Tc=80°C TYN Tc=90°C	8 A
$I_{TSM}$	Non repetitive surge peak on-state current ( T <sub>j</sub> initial = 25°C )	tp=8.3 ms	125 A
		tp=10 ms	120 A
$I^2t$	$I^2t$ value	tp=10 ms	72 A <sup>2</sup> s
di/dt	Critical rate of rise of on-state current Gate supply : I <sub>G</sub> = 100 mA di <sub>G</sub> /dt = 1 A/μs		100 A/μs
T <sub>stg</sub> T <sub>J</sub>	Storage and operating junction temperature range	- 40 to + 150 - 40 to + 125	°C °C
T <sub>I</sub>	Maximum lead temperature for soldering during 10 s at 4.5 mm from case		260 °C

Symbol	Parameter	TYN/TXN							Unit
		0512	112	212	412	612	812	1012	
V <sub>DRM</sub> V <sub>RIRM</sub>	Repetitive peak off-state voltage T <sub>j</sub> = 125 °C	50	100	200	400	600	800	1000	V

**TXN/TYN 0512 ---> TXN/TYN 1012**

**THERMAL RESISTANCES**

Symbol	Parameter	Value	Unit	
Rth (j-a)	Junction to ambient	60	°C/W	
Rth (j-c) DC	Junction to case for DC	TXN	3.5	°C/W
		TYN	2.5	

**GATE CHARACTERISTICS** (maximum values)

$P_G$  (AV) = 1W    $P_{GM}$  = 10W (tp = 20 μs)    $I_{FGM}$  = 4A (tp = 20 μs)    $V_{RGM}$  = 5 V.

**ELECTRICAL CHARACTERISTICS**

Symbol	Test Conditions	Value	Unit	
$I_{GT}$	$V_D=12V$ (DC) $R_L=33\Omega$ $T_j=25^\circ C$	MAX	15	mA
$V_{GT}$	$V_D=12V$ (DC) $R_L=33\Omega$ $T_j=25^\circ C$	MAX	1.5	V
$V_{GD}$	$V_D=V_{DRM}$ $R_L=3.3k\Omega$ $T_j=125^\circ C$	MIN	0.2	V
tgt	$V_D=V_{DRM}$ $I_G = 40mA$ $dI_G/dt = 0.5A/\mu s$ $T_j=25^\circ C$	TYP	2	μs
$I_L$	$I_G= 1.2 I_{GT}$ $T_j=25^\circ C$	TYP	50	mA
$I_H$	$I_T= 100mA$ gate open $T_j=25^\circ C$	MAX	30	mA
$V_{TM}$	$I_{TM}= 24A$ tp= 380μs $T_j=25^\circ C$	MAX	1.6	V
$I_{DRM}$ $I_{RRM}$	$V_{DRM}$ Rated $V_{RRM}$ Rated $T_j=25^\circ C$	MAX	0.01	mA
		$T_j=125^\circ C$	3	
dV/dt	Linear slope up to $V_D=67\%V_{DRM}$ gate open $T_j=125^\circ C$	MIN	200	V/μs
tq	$V_D=67\%V_{DRM}$ $I_{TM}= 24A$ $V_R= 25V$ $dI_{TM}/dt=30 A/\mu s$ $dV_D/dt= 50V/\mu s$ $T_j=125^\circ C$	TYP	70	μs

