

10A 800V TO-262

# THYRISTOR Type : TSN10A80

Construction : Planar Structure Reverse Conducting

Futures : High  $V_{DRM}$  & Permissible  $di/dt$

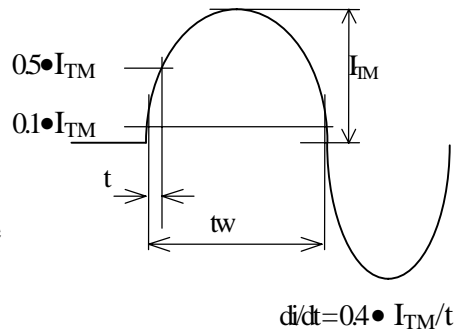
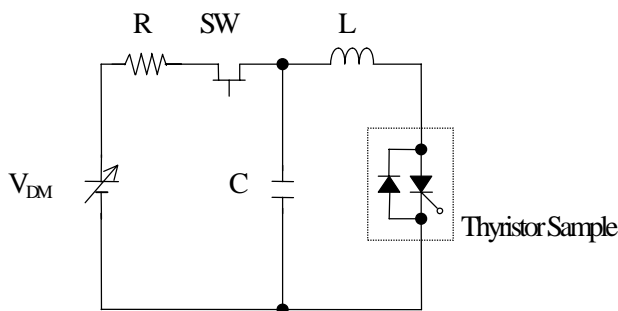
Application : Stator for HID Lamp Ballast Circuit

weight : 1.45g

## Absolute Maximum Ratings

Rating	Symbol	Conditions	Max. Rated Value	Unit
Repetitive Peak off-state Voltage	$V_{DRM}$	$T_J=25^{\circ}C$	800	V
Repetitive Peak On-State Current *	$I_{TRM}$	$T_c \leq 100^{\circ}C, V_{DM} \leq 400V$ $I_G \geq 80mA, di/dt \geq 0.5A/\mu s$ $tw \leq 1.0\mu s, di/dt \leq 1500A/\mu s$ $duty \leq 0.005\%$	500	A
Repetitive Peak Forward Current *	$I_{FRM}$	$T_c \leq 100^{\circ}C, tw \leq 1.0\mu s$ $duty \leq 0.005\%$	500	A
Critical Rate of Rise of Off-State Voltage Permissible Rate of Down of On-State Current *	$di/dt$	$T_c \leq 100^{\circ}C, V_{DM} \leq 400V$ $I_G \geq 80mA, di/dt \geq 0.5A/\mu s$ $I_{TM} \leq 500A, tw \leq 1.0\mu s$ 50Hz, 1min, without Cooling Fin	1500	A/ $\mu s$
Peak Gate Power	$P_{GM}$	$f \geq 50Hz, duty \leq 10\%$	5	W
Average Gate Power	$P_{GAV}$		0.5	W
Peak Forward Gate Current	$I_{GM}$	$f \geq 50Hz, duty \leq 10\%$	2	A
Peak Forward Gate Voltage	$V_{GM}$		10	V
Peak Reverse Gate Voltage	$V_{RGM}$		5	V
Operating Junction Temperature Range	$T_{jw}$		-40 to +125	$^{\circ}C$
Storage Temperature Range	$T_{stg}$		-40 to +150	$^{\circ}C$

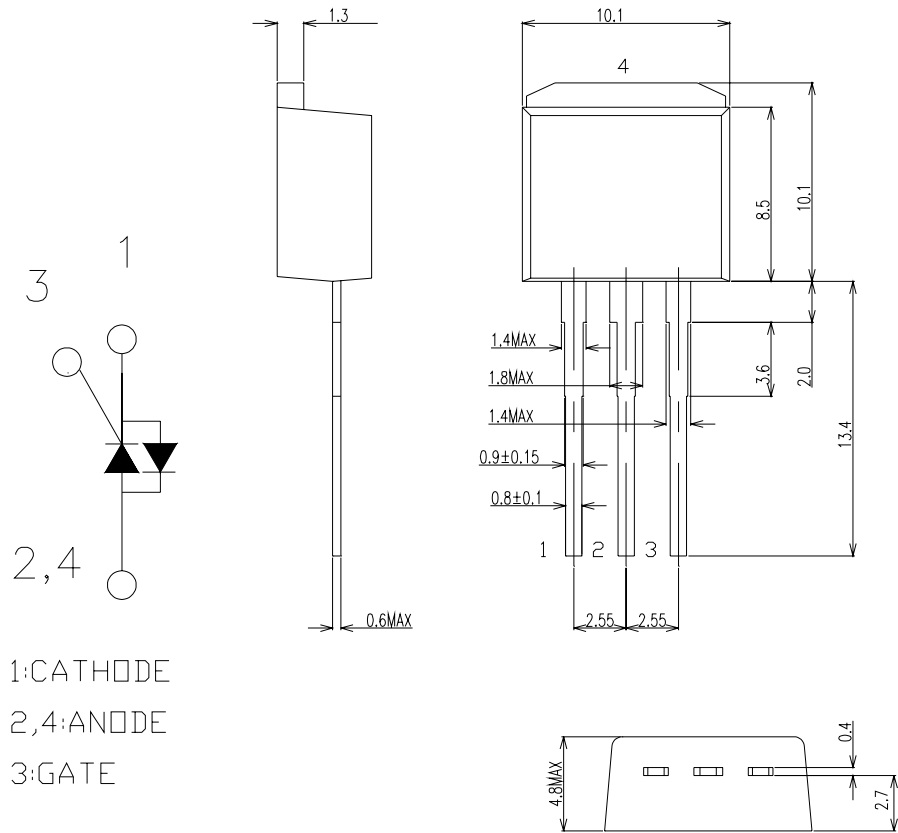
\* notes : Test Circuit & Current Wave Form



Electrical Characteristics (T<sub>j</sub>=25°C)

Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Off-State Current	I <sub>DM</sub>	V <sub>DM</sub> =V <sub>DRM</sub>			100	μA
Peak On-State Voltage	V <sub>TM</sub>	I <sub>TM</sub> =20A			1.50	A
Peak Forward Voltage	V <sub>FM</sub>	I <sub>FM</sub> =10A			1.50	A
Gate Trigger Current	I <sub>GT</sub>	V <sub>DM</sub> =6V, R <sub>L</sub> =10ohm			20	mA
Gate Trigger Voltage	V <sub>GT</sub>				1.0	V
Holding Current	I <sub>H</sub>	I <sub>G</sub> =50mA, I <sub>TM</sub> =1A		7		mA
Latching Current	I <sub>L</sub>	I <sub>G</sub> =50mA		13		mA
Thermal Resistance	R <sub>th(j-c)</sub>	Junction to Case			5	°C/w
Thermal Resistance	R <sub>th(j-a)</sub>	Junction to Ambient			80	°C/w

TSN10A08 OUTLINE DRAWING (Dimension:mm)



1:CATHODE  
2,4:ANODE  
3:GATE