

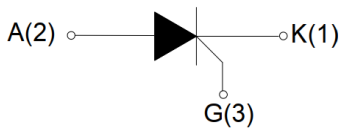
### Features

- Blocking Voltage to 600 V
- Glass Passivated Surface for Reliability and Uniformity
- RoHS Compliant
- High  $dV/dt$  Rate
- $I_{T(RMS)}$  to 2A of SCR



TO-252-4R

### Pin Configuration



### Absolute Maximum Ratings (T<sub>c</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Value	Unit
Storage junction temperature range	T <sub>stg</sub>	-40~150	°C
Operating junction temperature range	T <sub>j</sub>	-40~110	°C
Repetitive peak off-state voltage (T <sub>j</sub> =25°C)	V <sub>DRM</sub>	600	V
Repetitive peak reverse voltage (T <sub>j</sub> =25°C)	V <sub>RRM</sub>	600	V
RMS on-state current	I <sub>T(RMS)</sub>	2	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I <sub>TSM</sub>	20	A
I <sup>2</sup> t value for fusing (tp=10ms)	I <sup>2</sup> <sub>t</sub>	2	A <sup>2</sup> s
Critical rate of rise of on-state current (I <sub>G</sub> =2×I <sub>GT</sub> )	dI/dt	50	A/μs
Peak gate current	I <sub>GM</sub>	0.2	A
Average gate power dissipation	P <sub>G(AV)</sub>	0.1	W
Peak gate power	P <sub>GM</sub>	0.5	W

Thermal Resistance(between Junction and Case) @TO-252-4R	$R_{\theta(J-C)}$	6.5 (Typ.)	°C/W
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### Electronics Characteristics (T<sub>c</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Min	Typ.	Max.	Unit
Gate Trigger Current (Continuous dc)@VD=12V, RL=33Ω	I <sub>GT</sub>	-	50	200	uA
Gate Trigger Voltage (Continuous dc) @VD=12V, RL=33Ω	V <sub>GT</sub>	-	0.6	0.8	V
Gate non-trigger voltage@VD=VDRM,Tj=110°C	V <sub>GD</sub>	0.2	-	-	V
Holding Current@IT=50mA	I <sub>H</sub>	-	-	5	mA
Latching Current@IG=1.2IGT	I <sub>L</sub>	-	-	6	mA
Critical Rate-of-Rise of Off State Voltage@VD=0.66xVDRM, Tj=110°C, RGK=1 KΩ	dV/dt	20	-	-	V/μs
Peak Forward On-State Voltage@ITM=4A, tp=380μs, Tj=25°C	V <sub>TM</sub>	-	-	1.5	V
Peak Repetitive Forward@VDRM=VRRM, RGK=1 KΩ Tj=25°C	I <sub>DRM</sub>	-	-	5	μA
Reverse Blocking Current@VDRM=VRRM, RGK=1 KΩ Tj=110°C	I <sub>RRM</sub>	-	-	100	μA

Note: The above typical parameters or typical characteristics are only indicative and do not make specific guarantees. If detailed values are required, additional communication and provision are required.

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

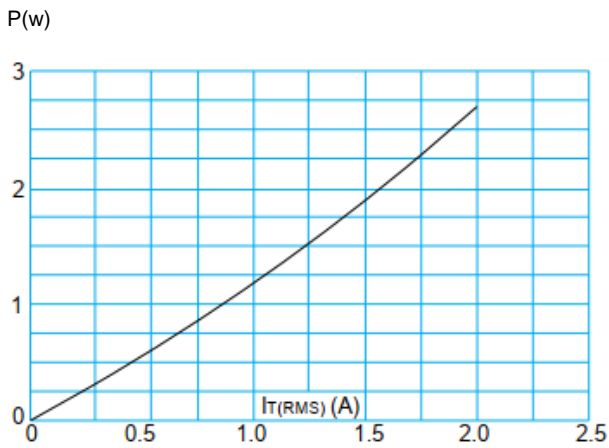


FIG.3: Surge peak on-state current versus number of cycles

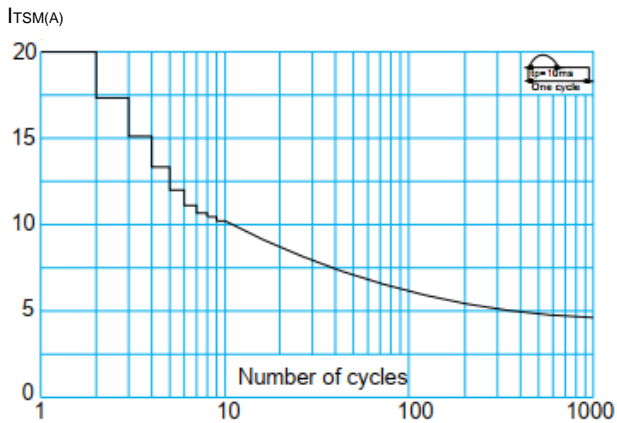


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20\text{ms}$ , and corresponding value of  $I^2 t$  ( $di/dt < 50\text{A}/\mu\text{s}$ )

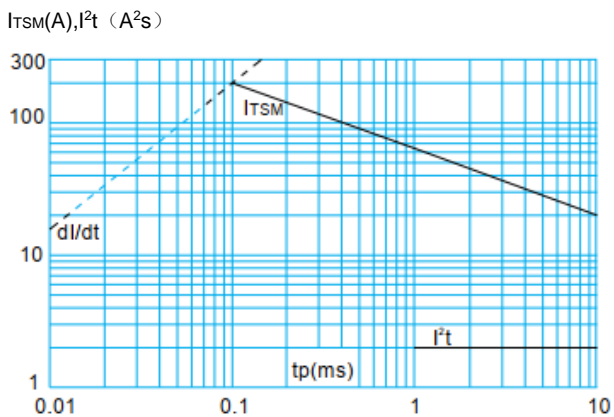


FIG.2: RMS on-state current versus case temperature in different packaging

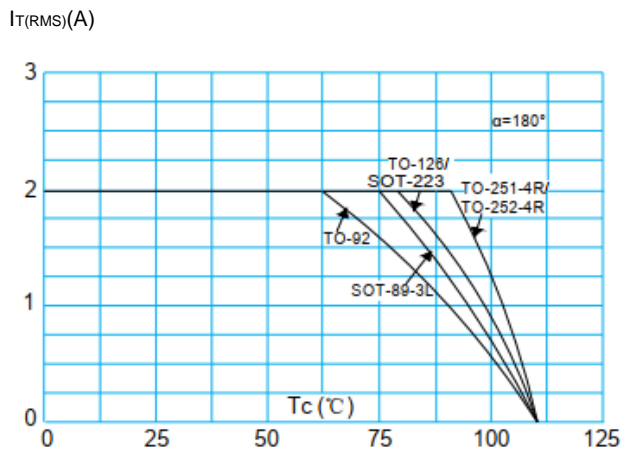


FIG.4: On-state characteristics (maximum values)

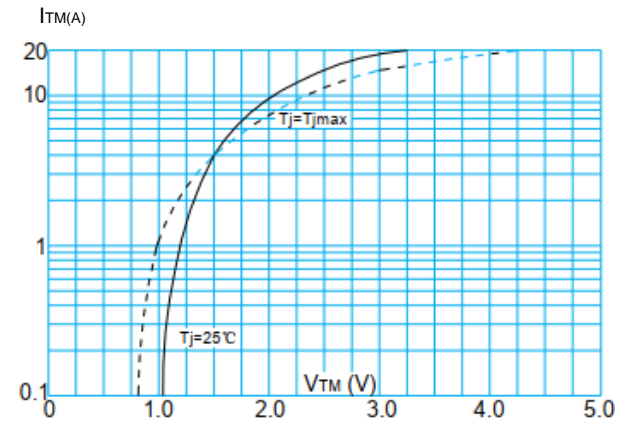
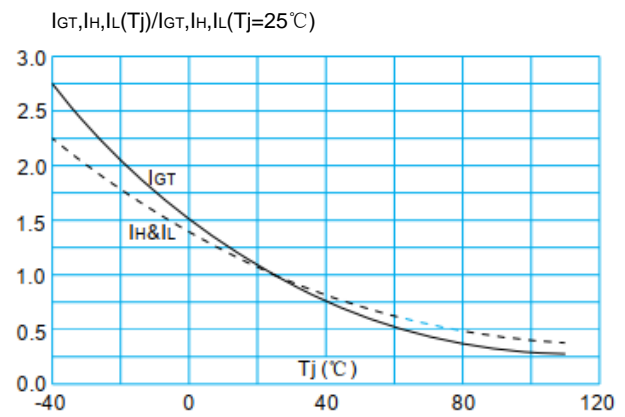
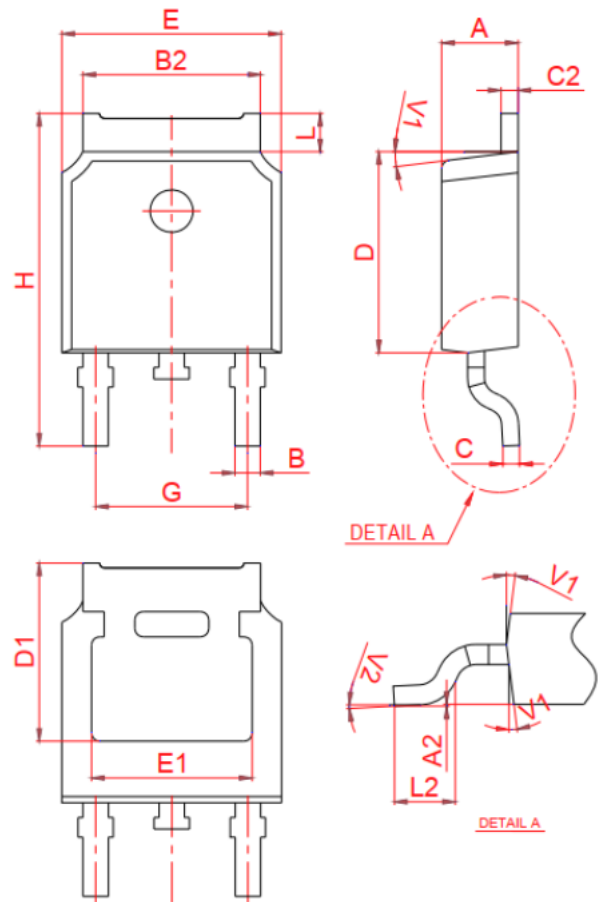


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

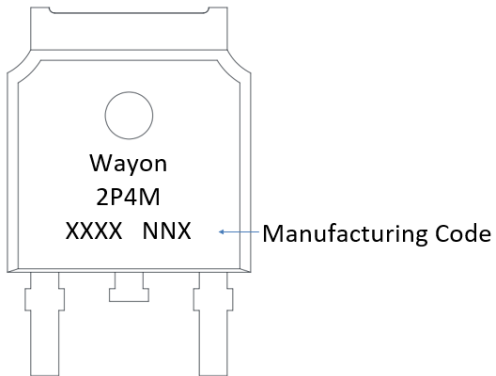


Outline Drawing- TO-252-4R

SYMBOL	MM		
	MIN	NOM	MAX
A	2.10	-	2.50
A2	0	-	0.20
B	0.66	-	0.91
B2	5.10	-	5.50
C	0.46	-	0.58
C2	0.43	-	0.61
D	5.90	-	6.30
D1	5.30REF		
E	6.40	-	6.80
E1	4.63	-	-
G	4.372	-	4.772
H	9.40	-	10.50
L	0.88	-	1.28
L2	1.35	-	1.75
V1	-	7°	-
V2	0°	-	8°



## Marking Code:



## Package Information

Package	Base qty.	Delivery mode
TO-252-4R	2500	Reel

## Contact Information

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## Product Specification Statement

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