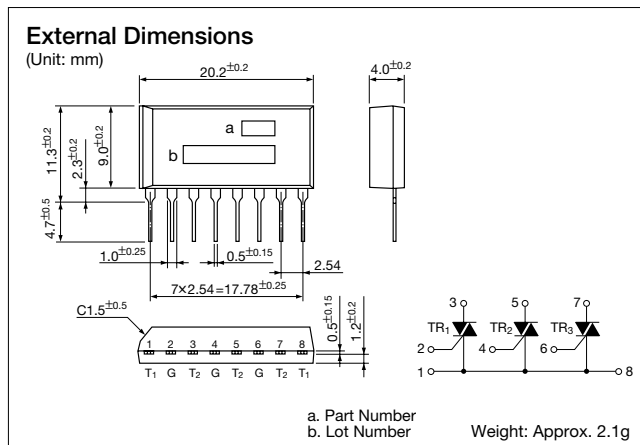


# 1.2A 3 circuits Triac Array

## STA203A

### ■ Features

- 1.2A 3 Triacs combined one package
- Repetitive peak off-state voltage:  $V_{DRM}=400V$
- RMS on-state current:  $I_{T(RMS)}=1.2A$
- Gate trigger current:  $I_{GT}=3mA$  max (MODE I, II, III)



### ■ Absolute Maximum Ratings

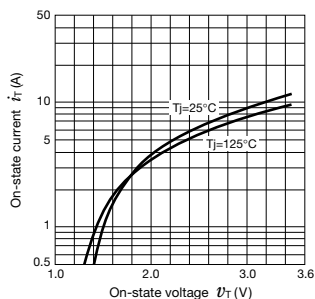
Parameter	Symbol	Ratings	Unit	Conditions
Repetitive peak off-state voltage	$V_{DRM}$	400	V	
RMS on-state current	$I_{T(RMS)}$	1.2	A	Conduction angle 360°, $T_c=97^\circ C$
Surge on-state current	$I_{TSM}$	10	A	50Hz full-cycle sine wave, Peak value, Non-repetitive, $T_j=125^\circ C$
Peak gate voltage	$V_{GM}$	6	V	
Peak gate current	$I_{GM}$	0.5	A	
Peak gate power loss	$P_{GM}$	1	W	
Average gate power loss	$P_{G(AV)}$	0.1	W	
Junction temperature	$T_j$	-40 to +125	$^\circ C$	
Storage temperature	$T_{stg}$	-40 to +125	$^\circ C$	

### ■ Electrical Characteristics

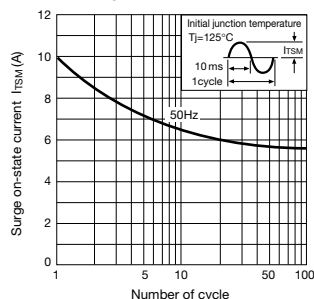
( $T_j=25^\circ C$ , unless otherwise specified)

Parameter	Symbol	Ratings			Unit	Conditions			
		min	typ	max					
Off-state current	$I_{DRM}$		0.1	1.0	mA	$V_D=V_{DRM}$ , $R_{GK}=\infty$ , $T_j=125^\circ C$			
				0.1		$V_D=V_{DRM}$ , $R_{GK}=\infty$ , $T_j=25^\circ C$			
On-state voltage	$V_{TM}$			1.6	V	Pulse test, $I_{TM}=1.6A$			
Gate trigger voltage	I	$V_{GT}$		2.0	3.5	V	$V_D=6V$ , $R_L=10\Omega$ , $T_c=25^\circ C$		
			II		0.7			1.2	$T_2^+$ , $G^+$
			III		0.8			1.2	$T_2^+$ , $G^-$
			IV		2.0				$T_2^-$ , $G^-$
Gate trigger current	I	$I_{GT}$		2.0	3.0	mA	$V_D=6V$ , $R_L=10\Omega$ , $T_c=25^\circ C$		
			II		1.8			3.0	$T_2^+$ , $G^-$
			III		2.3			3.0	$T_2^+$ , $G^+$
			IV		13.0				$T_2^-$ , $G^+$
Gate non-trigger voltage	$V_{GD}$	0.1			V	$V_D=1/2 \times V_{DRM}$ , $T_j=125^\circ C$			
Holding current	$I_H$			5.0	mA	$V_D=6V$			
Thermal resistance	$R_{th}$			20.0	$^\circ C/W$	Junction to case			

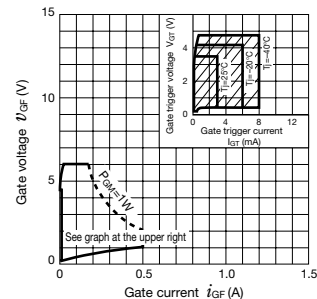
## $V_T - I_T$ Characteristics (max)



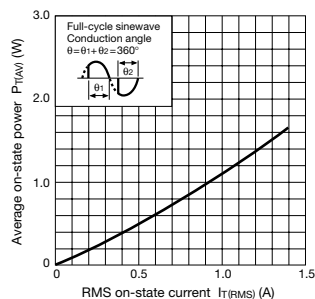
## $I_{TSM}$ Ratings



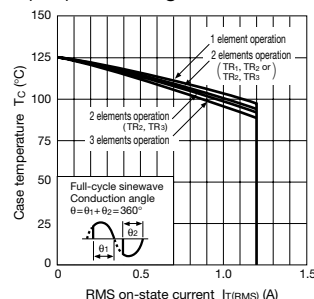
## Gate Characteristics



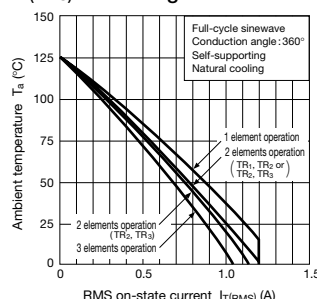
## $I_T(RMS) - P_T(AV)$ Characteristics



## $I_T(RMS) - T_C$ Ratings

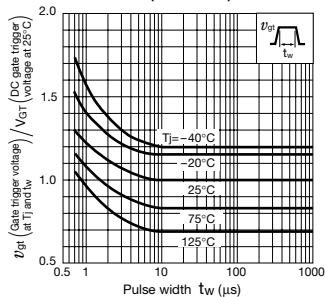


## $I_T(RMS) - T_a$ Ratings

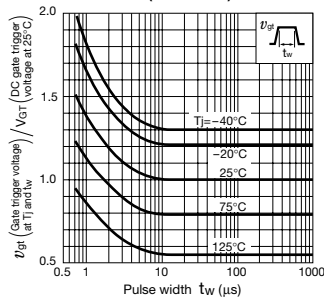


## Pulse trigger temperature Characteristics $V_{gt}$ (Typical)

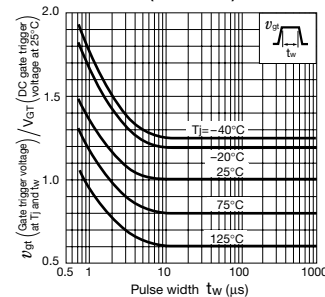
### (MODE-I)



### (MODE-II)

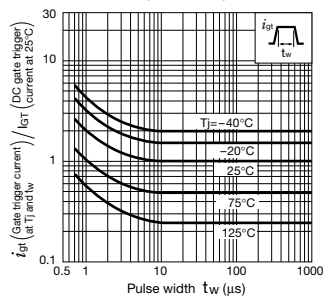


### (MODE-III)

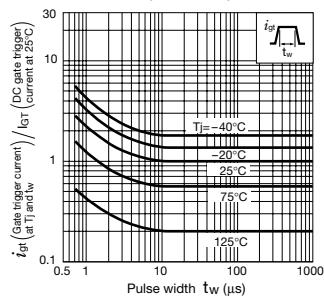


## Pulse trigger temperature Characteristics $I_{gt}$ (Typical)

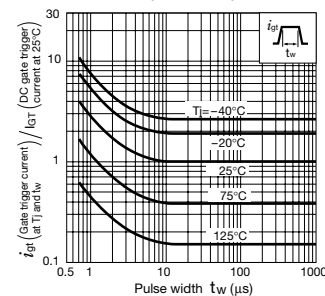
### (MODE-I)



### (MODE-II)



### (MODE-III)



## Transient thermal resistance Characteristics

