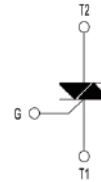
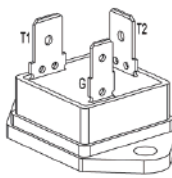
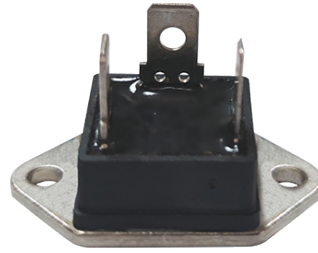


Product Description

KTA series Triac with TO-3 package has high current capability and high immunity, it is widely used in motor controls, power converters, AC power supply controllers, switch & resonant mode power supply, lighting and temperature controllers, etc.

- ◆ High Current Triac
- ◆ High Surge Capability
- ◆ TO-3 Package
- ◆ Panel Mounting



Ordering Information

KTA	25	G	-	600	BW	(B	S	T)
KTA series	Current 25:25A 40:40A	Package G:TO-3		Voltage 600:600V 800:800V	Trigger Sensitivity BW:50mA	Characteristic code Blank: Ferroalloy base plate B: Brass base plate	Characteristic code Blank: Standard main electrode terminal S: Main electrode terminal aperture 3.1mm	Characteristic code Blank: Gate terminal thickness 0.5mm T: Gate terminal thickness 0.8mm

Technical Specifications

Absolute Maximum Ratings				
Parameter	Symbol	Value		Unit
		600V	800V	
Operating junction temperature range	T_j	-40 ~ 125		°C
Storage junction temperature range	T_{sta}	-40 ~ 150		°C
On-state current	$I_{T(RMS)}$	KTA25G series	25	A
		KTA40G series	40	
Non repetitive surge peak on-state current (full cycle, T_j initial = 25 °C)(F=50Hz)	I_{TSM}	KTA25G series	250	A
		KTA40G series	400	
Repetitive peak off-state voltage($T_j=25$ °C)	V_{DRM}	600	800	V
Repetitive peak reverse voltage($T_j=25$ °C)	V_{RRM}	600	800	V
Non repetitive peak off-state voltage	V_{DSM}	$V_{DRM} + 100$		V
Non repetitive peak reverse voltage	V_{RSM}	$V_{RRM} + 100$		V
I^2t Value for fusing ($t_p=10ms$)	I^2t	KTA25G series	312	A ² s
		KTA40G series	800	
Critical rate of rise of on-state current ($I_g=2 \times I_{GT}$)	di/dt	50		A/ μ s
Peak gate current	I_{GM}	4		A
Peak gate power	P_{GM}	10		W
Average gate power dissipation	$P_{G(AV)}$	1		W

General Specifications

Electrical Characteristics (Tj=25 C ,unless otherwise specified)

Symbol	Test conditions	Value	Unit
I_{GT}	$V_D=12V R_L=33\Omega$	I - II - III Max. 50	mA
V_{GT}	$V_D=12V R_L=33\Omega$	I - II - III Max. 1.3	V
I_{GD}	$V_D=V_{DRM} T_J=125 C R_L=3.3k\Omega$	I - II - III Min. 0.2	V
I_L	$I_G=1.2 \times I_{GT}$	I - III Max. 80 II 100	mA
I_H	$I_T=100mA$	Max. 60	mA
dV/dt	$V_D=2/3V_{DRM}$ gate open $T_J=125 C$	I - II - III Min. 1000	V/ μs

Static Characteristics

Symbol	Test conditions	Value	Unit
V_{TM}	$I_{TM}=35A t_p=380\mu s T_J=25 C$ $I_{TM}=60A t_p=380\mu s T_J=25 C$	KTA25G series Max. 1.55 KTA40G series Max. 1.55	V
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_J=25 C$ Max. 10	μA
I_{RRM}		$T_J=125 C$ Max. 5	mA

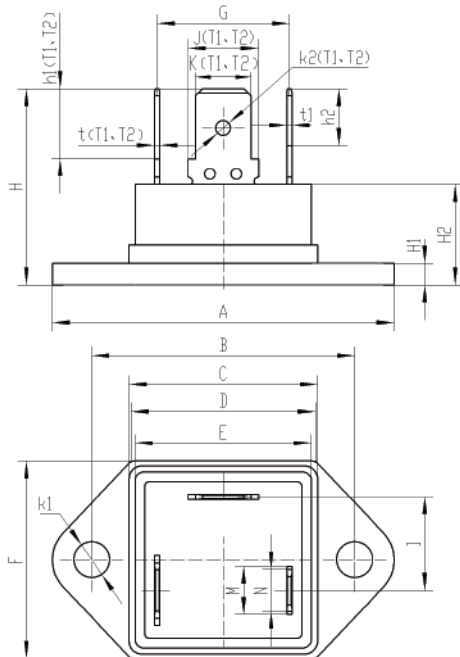
Thermal Resistance

Symbol	Test conditions	Value	Unit
$R_{th(j-c)}$	junction to case(AC)	KTA25G series 0.85 KTA40G series 0.65	C/W

Application

KTA series triac is widely used in motor controls, power converters, AC power supply controllers, switch & resonant mode power supply, lighting and temperature controllers, etc.

Package Dimensions



Ref.	Dimensions (mm)			Ref.	Dimensions (mm)		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A			39.2	J		8	
B	29.8	30	30.2	K	6.2	6.35	6.5
C			21.7	M		5.5	
D			21.5	N	4.7	4.8	4.9
E			20.5	t		0.8	
F			23	t1		0.5	
H1	2.4	2.5	2.6	h1		8	
H2		11.5		h2		6.5	
H			23.5	k1	$\phi 4.1$	$\phi 4.2$	$\phi 4.3$
G		15.1		k2		$\phi 1.8$	
I		10.7			$\phi 3.0$	$\phi 3.1$	$\phi 3.2$

The characteristic code S represents that the aperture k2 of T1 and T2 terminals is 3.1mm, which is suitable for M3 screw installation and wiring
The characteristic code T represents that the gate terminal thickness t1 is 0.8mm

Characteristic Curve

Fig.1 Power dissipation and on-state current curve

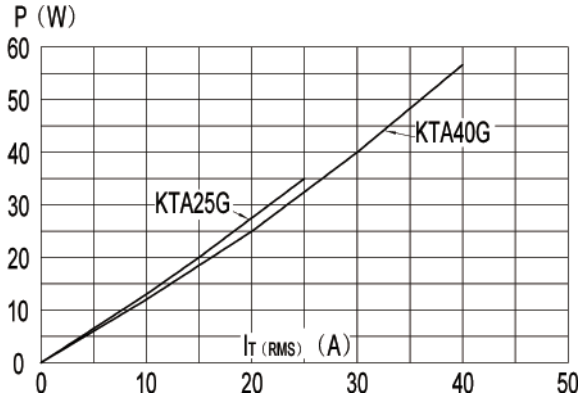


Fig.2 On-state current and temperature curve

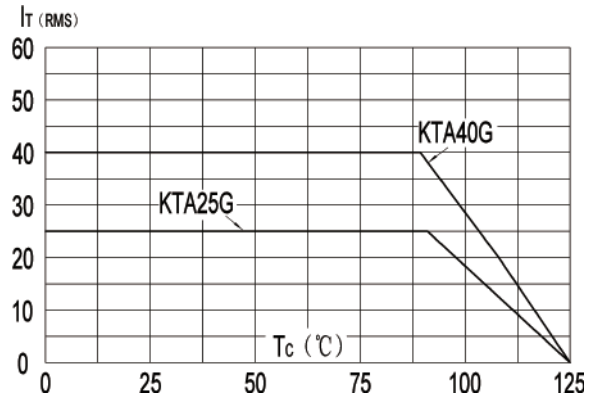


Fig.3 Surge peak on-state current versus number of cycles

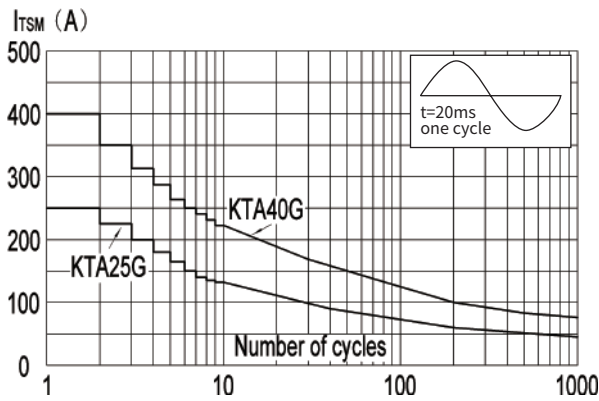


Fig.4 On-state characteristics (maximum values)

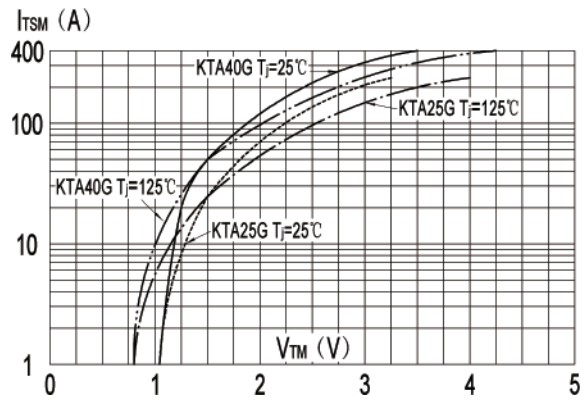


Fig.5 Non-repetitive surge peak on-state current for a sinusoidal pulse and corresponding value of I²t

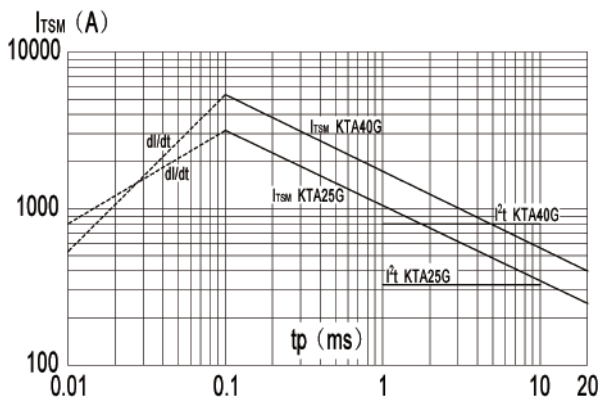


Fig.6 Relative variation of gate trigger, holding and latching current versus junction temperature

