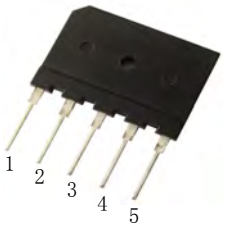
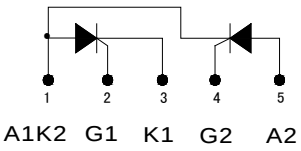
STT25G**P

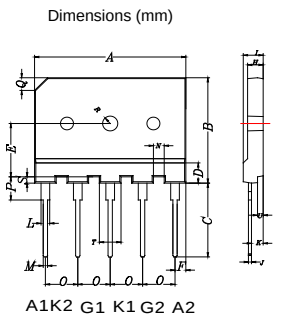
Thyristor-Thyristor Modules





Type	V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V
STT25G08P	900	800
STT25G12P	1300	1200
STT25G14P	1500	1400
STT25G16P	1700	1600
STT25G18P	1900	1800

Dimensions in mm (1mm=0.0394")



mm	MIN	TYP	MAX
A	34.70	35.0	35.30
B	24.70	25.0	25.30
C	17.0	17.50	18.0
D	4.70	4.80	4.90
E	12.45	12.65	12.85
F	2.30	2.50	2.70
G	3.10	3.25	3.40
H	3.40	3.60	3.80
I	4.40	4.60	4.80
J	2.50	2.70	2.90
K	0.60	0.70	0.80
L	2.0	2.20	2.40
M	0.90	1.0	1.10
N	2.50	2.60	2.90
O	7.30	7.50	7.70
P	5.40	5.50	5.60
Q		(3.0)×45°	
R	?3.10	?3.25	?3.40
S	1.40	1.50	1.60
T	4.60	4.80	5.0
U	1.20	1.30	1.40

Symbol	Test Conditions		Maximum Ratings	Unit
I_{TRMS}, I_{FRMS} I_{TAVM}, I_{FAVM}	$T_{VJ}=T_{VJM}$ $T_C=85^oC$; 180° sine		39 25	A
I_{TSM}, I_{FSM}	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	310 350	A
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	280 300	
$\int i^2dt$	$T_{VJ}=45^oC$ $V_R=0$ $T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine t=10ms(50Hz), sine t=8.3ms(60Hz), sine	500 480 400 380	A^2s
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ f=50Hz, t_p=200us $V_D=2/3V_{DRM}$ I_G=0.45A di_G/dt=0.45A/us	repetitive, I_T=25A non repetitive, $I_T=I_{TAVM}$	150 500	A/us
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$; $V_{DR}=2/3V_{DRM}$ $R_{GK}=\infty$; method 1 (linear voltage rise)		1000	V/us
P_{GM}	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$	t_p=30us t_p=300us	10 5	W
P_{GAV}			0.5	W
V_{RGM}			10	V
T_{VJ} T_{VJM} T_{stg}			-40...+125 125 -40...+125	^oC
V_{ISOL}	50/60Hz, RMS $I_{ISOL}\leq$1mA	t=1min t=1s	3000 3600	V~
M_d	Mounting torque (M3)		0.8-1.2/7-11	Nm/lb.in.
Weight	Typical including screws		15	g

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STT25G**P

Thyristor-Thyristor Modules

Symbol	Test Conditions	Characteristic Values	Unit
I_{RRM}, I_{DRM}	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$; $V_D=V_{DRM}$	2	mA
V_{TM}	I_{TM}=80A; T_{VJ}=25 °C	1.64	V
V_{TO}	For power-loss calculations only (T_{VJ}=125°C)	0.85	V
r_T		11	mΩ
V_{GT}	V_D=6V; T_{VJ}=25°C T_{VJ}=-40°C	1.5 1.6	V
I_{GT}	V_D=6V; T_{VJ}=25°C T_{VJ}=-40°C	100 200	mA
V_{GD}	$T_{VJ}=T_{VJM}$; V_D=2/3V_{DRM}	0.2	V
I_{GD}		10	mA
I_L	T_{VJ}=25°C; t_p=10us; V_D=6V I_G=0.45A; di_G/dt=0.45A/us	450	mA
I_H	T_{VJ}=25°C; V_D=6V; R_{GK}=∞	200	mA
t_{gd}	T_{VJ}=25°C; V_D=1/2V_{DRM} I_G=0.45A; di_G/dt=0.45A/us	2	us
t_q	$T_{VJ}=T_{VJM}$; I_T=20A; t_p=200us; -di/dt=10A/us typ. V_R=100V; dv/dt=20V/us; V_D=2/3V_{DRM}	150	us
Q_S	$T_{VJ}=T_{VJM}$; I_T, I_F=25A; -di/dt=0.64A/us	50	uC
I_{RM}		6	A
R_{thJC}	per thyristor/diode; DC current per module	1.62 0.81	K/W
R_{thJK}	per thyristor/diode; DC current per module	1.88 0.94	K/W
d_S	Creeping distance on surface	12.7	mm
d_A	Strike distance through air	9.6	mm
a	Maximum allowable acceleration	50	m/s^2

FEATURES

* Ideal for printed circuit board
* Isolation voltage 3000 V~
* Reliable low cost construction utilizing molded plastic technique results in inexpensive product
* RoHS Compliant

APPLICATIONS

* DC motor control
* Softstart AC motor controller
* Light, heat and temperature control

ADVANTAGES

* Space and weight savings
* Simple mounting with single screws
* Improved temperature and power cycling
* Reduced protection circuits

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