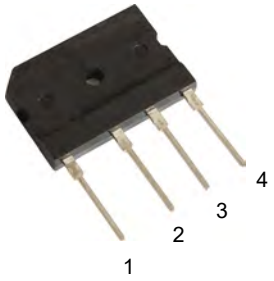
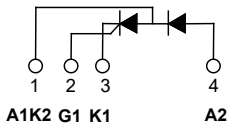
STD25G08/18P

Thyristor-Diode Modules

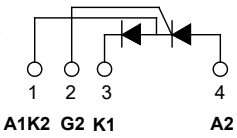


Type	V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V
STD25G08P	900	800
STD25G12P	1300	1200
STD25G14P	1500	1400
STD25G16P	1700	1600
STD25G18P	1900	1800

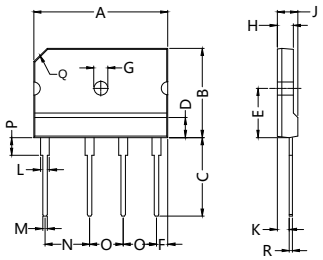
STD



SDT



Dimensions in mm



Dim.	Millimeter Min.	Millimeter Max.	Dim.	Millimeter Min.	Millimeter Max.
A	29.70	30.30	K	2.50	2.90
B	19.70	20.30	L	2.00	2.40
C	17.0	18.0	M	0.90	1.10
D	4.70	4.90	N	9.80	10.20
E	10.80	11.20	O	7.30	7.70
F	2.30	2.70	P	3.80	4.20
ØG	Ø3.00	Ø3.4	Q	-	C3
H	3.40	3.80	R	0.80	1.00
J	4.40	4.80			

Symbol	Test Conditions		Maximum Ratings	Unit
I_{TRMS}, I_{FRMS} I_{TAVM}, I_{FAVM}	$T_{VJ}=T_{VJM}$ $T_C=85^oC$; 180° sine		40 25	A
I_{TSM}, I_{FSM}	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	420 460	A
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	360 400	
$\int i^2dt$	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	1350 1300	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	1050 1030	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ f=50Hz, t_p=200us $V_D=2/3V_{DRM}$ I_G=0.45A di_G/dt=0.45A/us	repetitive, I_T=45A 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	°C
V_{ISOL}	50/60Hz, RMS $I_{ISOL}\leq$1mA	t=1min t=1s	3000 3600	V~
M_d	Mounting torque (M3)		2.5-4.0/22-35	Nm/lb.in.
Weight	Typical including screws		6.6	g

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STD25G16P

Thyristor-Diode 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_T, V_F	I_T, I_F=25A; T_{VJ}=25°C	1.50	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	1.68 0.84	K/W
R_{thJK}	per thyristor/diode; DC current per module	1.94 0.97	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 3600 V~
* Reliable low cost construction utilizing molded plastic technique results in inexpensive product

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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STD25G16P

Thyristor-Diode Modules

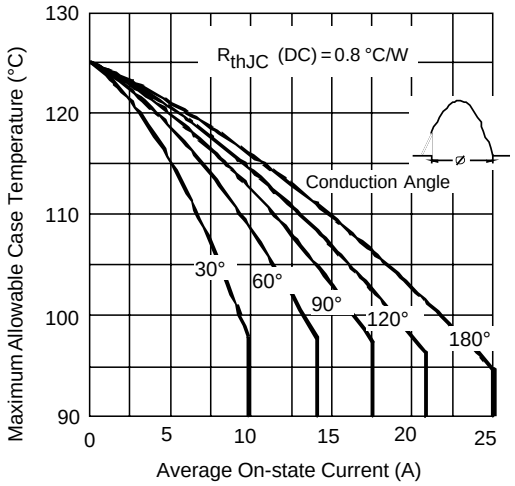

Fig. 1 Current Rating Characteristics

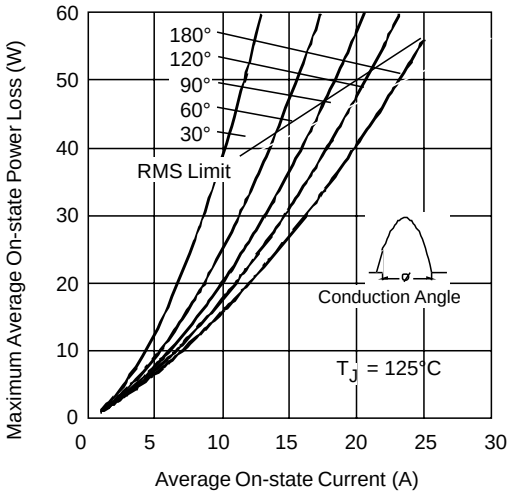

Fig. 2 On-state Power Loss Characteristics

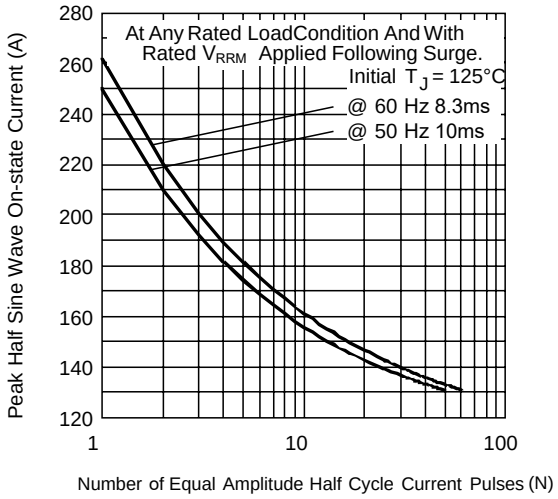

Fig. 3 Maximum Non-Repetitive Surge Current

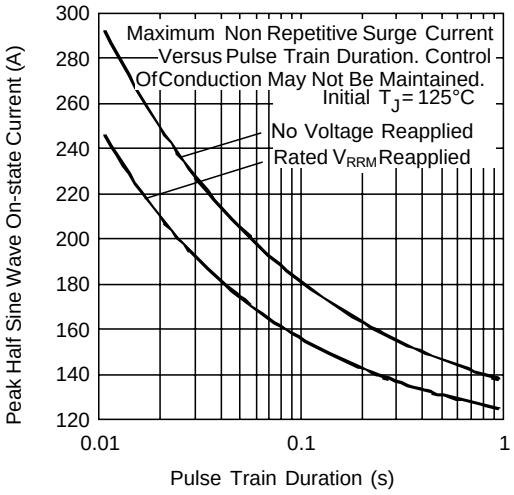

Fig. 4 Maximum Non-Repetitive Surge Current

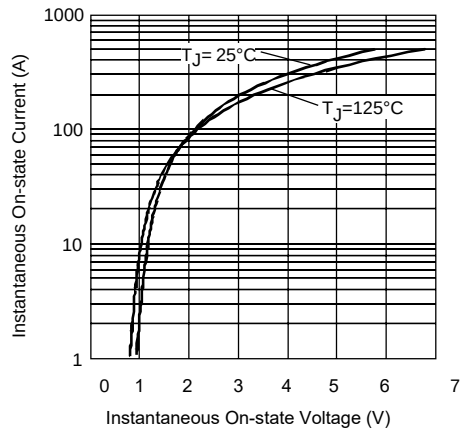

Fig. 5 On-state Voltage Drop Characteristics

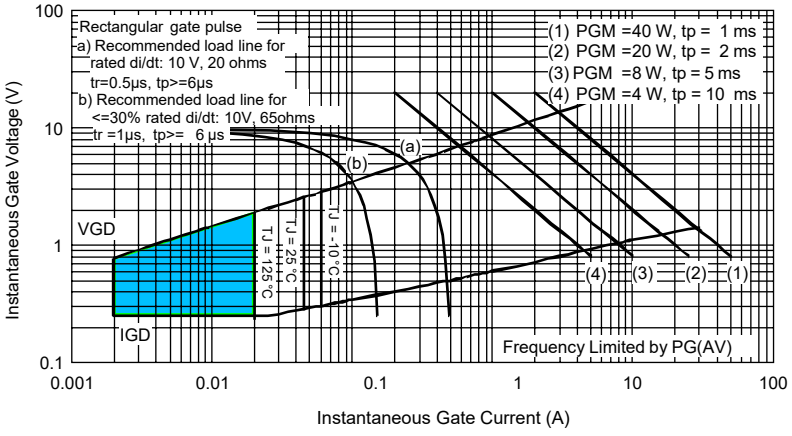

Fig. 6 Gate Characteristics

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