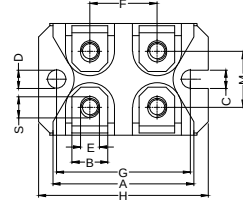
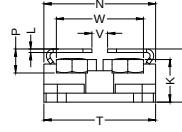
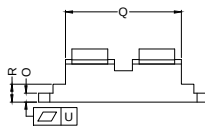
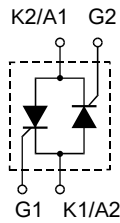


SSAC90G16S

Anti-Parallel Thyristor-Thyristor Modules(Solid State AC Switch)



Dim.	Millimeter		Dim.	Millimeter	
	Min.	Max.		Min.	Max.
A	31.30	31.62	M	12.20	14.00
B	7.80	8.20	N	25.15	25.62
C	4.09	4.29	O	1.98	2.13
D	4.09	4.29	P	4.15	4.62
E	4.09	4.29	Q	25.90	26.30
F	14.91	15.11	R	3.94	4.42
G	30.12	30.30	S	4.45	4.85
H	38.20	38.56	T	24.59	25.07
J	12.30	12.90	U	0.05	0.10
K	8.92	9.60	V	3.00	4.80
L	0.76	0.84	W	19.81	21.08

Type	V _{RSM} V _{DSM} V	V _{RRM} V _{DRM} V
SSAC90G12S	1200	1200
SSAC90G16S	1600	1600

Symbol	Test Conditions	Maximum Ratings	Unit
I_{RMS}	T _C = 110 ^o C, 50 - 400 Hz, module	90	A
I_{TRMS}	T _{VJ} = T _{VJM}	65	
I_{TAVM}	T _C = 110 ^o C; (180° sine)	41	
I_{TSM}	T _{VJ} =45 ^o C	t=10ms (50Hz), sine	A
	V _R =0	t=8.3ms (60Hz), sine	
	T _{VJ} =T _{VJM}	t=10ms(50Hz), sine	
	V _R =0	t=8.3ms(60Hz), sine	
I²t	T _{VJ} =45 ^o C	t=10ms (50Hz), sine	A ² s
	V _R =0	t=8.3ms (60Hz), sine	
	T _{VJ} =T _{VJM}	t=10ms(50Hz), sine	
	V _R =0	t=8.3ms(60Hz), sine	
(di/dt)_{cr}	T _{VJ} =T _{VJM} repetitive, I _T =150A	100	A/us
	f=50Hz, t _p =200us V _D =2/3V _{DRM} I _G =0.3A non repetitive, I _T =I _{TAVM} di _G /dt=0.3A/us	500	
(dv/dt)_{cr}	T _{VJ} =T _{VJM} ; V _{DR} =2/3V _{DRM} R _{GK} = ∞; method 1 (linear voltage rise)	1000	V/us
P_{GM}	T _{VJ} =T _{VJM} t _p =30us	10	W
P_{GAVM}	I _T =I _{TAVM} t _p =300us	5	
		0.5	
V_{RGM}		10	V
T_{VJ}		-40...+150	°C
T_{VJM}		150	
T_{stg}		-40...+150	
V_{ISOL}	50/60Hz, RMS I _{ISOL} ≤1mA	2500	V~
M_d	Mounting torque (M4) Terminal connection torque (M4)	1.1-1.5/9-13 1.1-1.5/9-13	Nm/lb.in.
Weight	typical	30	g

Sirectifier®

SSAC90G16S

Anti-Parallel Thyristor-Thyristor Modules(Solid State AC Switch)

Symbol	Test Conditions	Characteristic Values	Unit
I_R, I_D	$T_{VJ}=T_{VJM}; V_R=V_{RRM}; V_D=V_{DRM}$	≤ 20	mA
V_T	$I_T=80A; T_{VJ}=25^{\circ}C$	≤ 1.43	V
V_{TO}	For power-loss calculations only	≤ 0.9	V
r_T		≤ 5.8	m Ω
V_{GT}	$V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	≤ 1.5 ≤ 1.6	V
I_{GT}	$V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	≤ 100 ≤ 150	mA
V_{GD}	$T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$	≤ 0.2	V
I_{GD}		≤ 5	mA
I_L	$T_{VJ}=25^{\circ}C; t_p=10\mu s$ $I_G=0.3A; di_G/dt=0.3A/\mu s$	≤ 250	
I_H	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	≤ 100	
t_{gd}	$T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.3A; di_G/dt=0.3A/\mu s$	≤ 2	μs
t_q	$T_{VJ}=T_{VJM}; I_T=20A; t_p=200\mu s; di/dt=-10A/\mu s$ typ. $V_R=100V; dv/dt=15V/\mu s; V_D=2/3V_{DRM}$	≤ 150	
R_{thJC}	per thyristor; DC current per module	≤ 0.6 ≤ 0.3	K/W
R_{thCH}	per thyristor; DC current typ. per module typ.	≤ 0.1 ≤ 0.05	
d_s	Creeping distance on surface	≤ 8	mm
d_A	Creepage distance in air	≤ 4	
a	Max. allowable acceleration	≤ 50	m/s ²

FEATURES

- *Thyristor controller for AC for mains frequency
- *International standard package miniBLOC (ISOTOP compatible)
- *Isolation voltage 2500 V~
- *Glass passivated chips
- *UL File NO. E310749
- *RoHS compliance

APPLICATIONS

- *Switching and control of single and three phase AC
- *Softstart AC motor controller
- *Solid state switches
- *Light and temperature control

ADVANTAGES

- *Easy to mount with two screws
- *Space and weight savings
- *Improved temperature and power cycling
- *High power density



SSAC90G16S

Anti-Parallel Thyristor-Thyristor Modules(Solid State AC Switch)

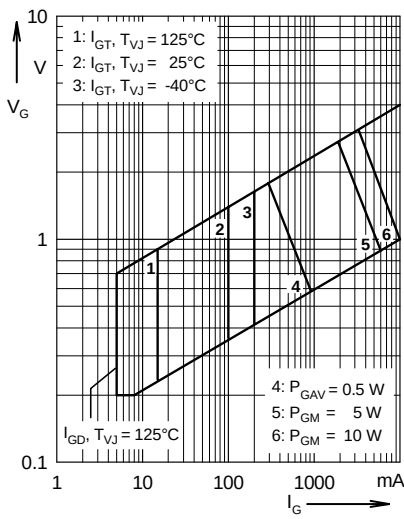


Fig. 1 Gate trigger characteristics

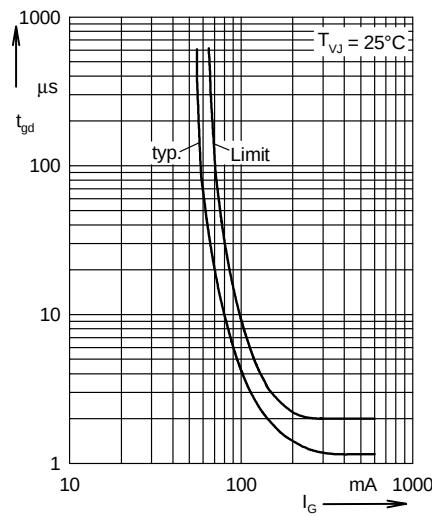


Fig. 2 Gate trigger delay time

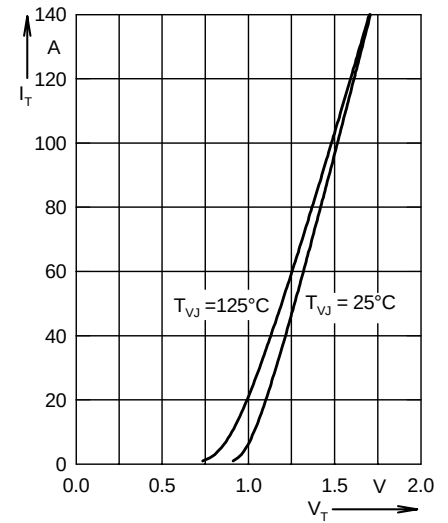


Fig. 3 Forward current versus voltage drop per leg

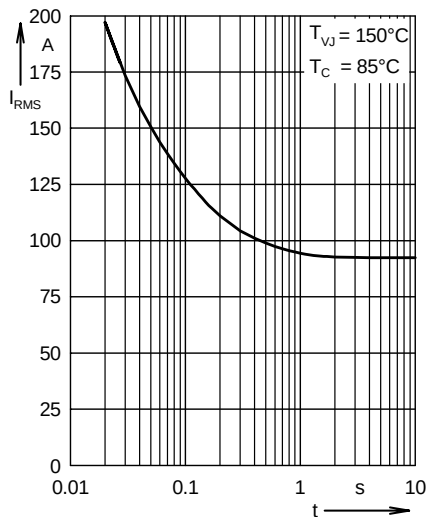


Fig. 4 Rated RMS current versus time (360° conduction)

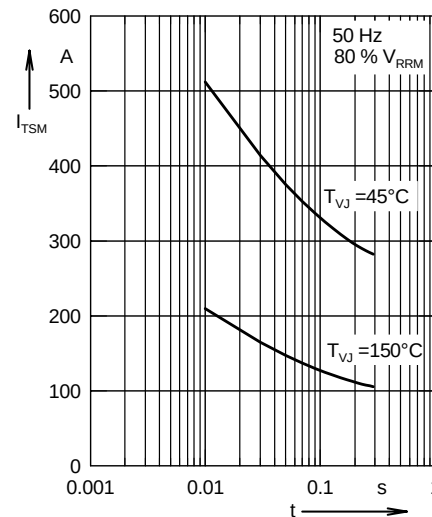


Fig. 5 Surge overload current

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Anti-Parallel Thyristor-Thyristor Modules(Solid State AC Switch)

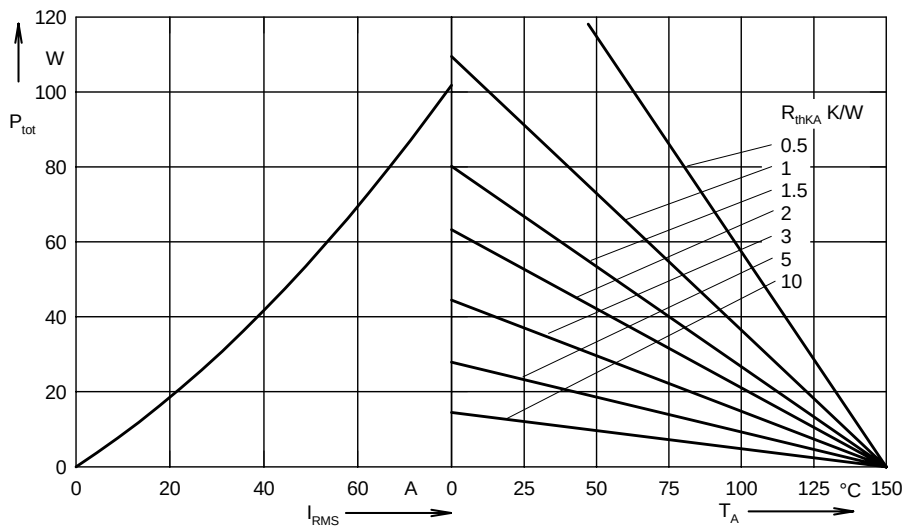


Fig. 6 Load current capability for single AC controller; 1 x SSAC 90

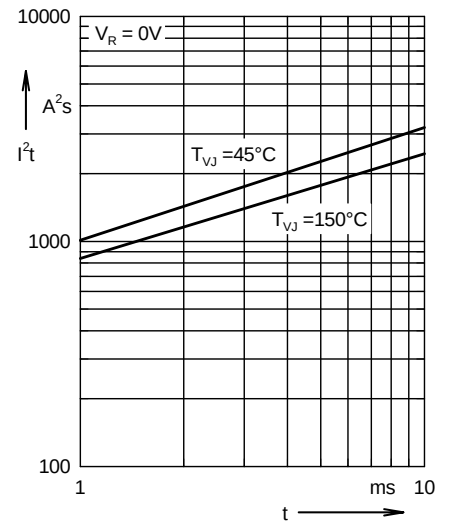


Fig. 7 I^2t versus time (per thyristor)

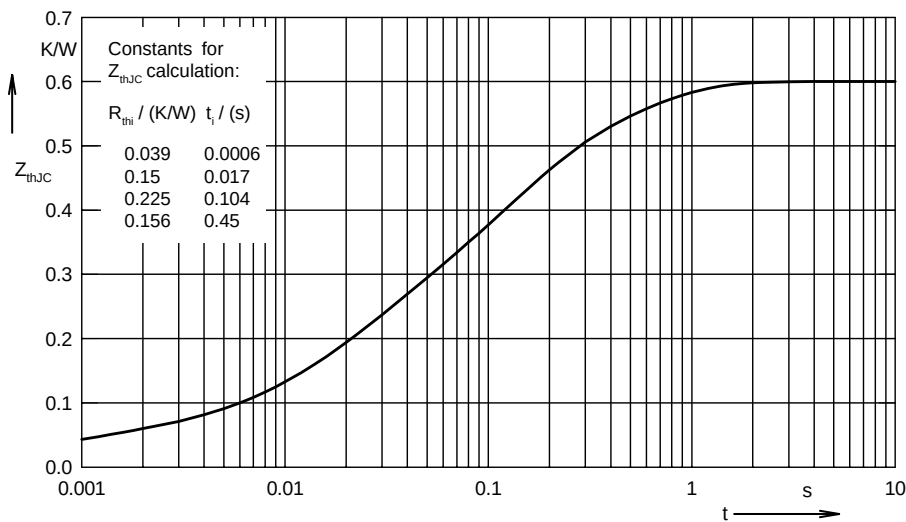


Fig. 8 Transient thermal impedance junction to case (per thyristor)

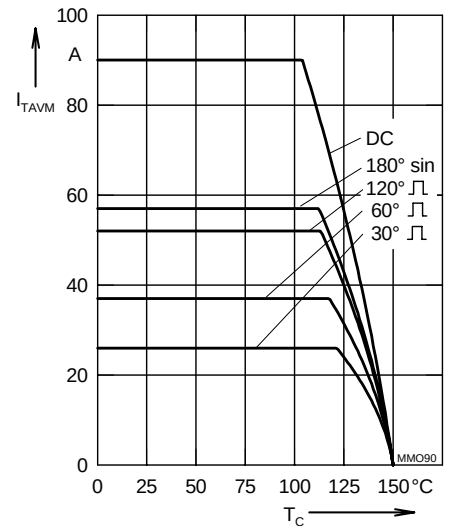


Fig. 9 Maximum forward current at case temperature