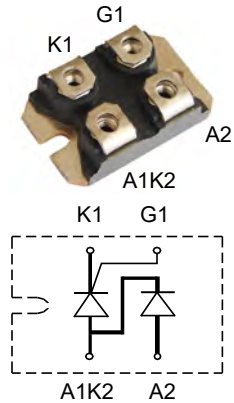
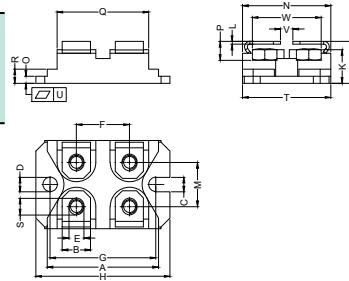


STD40GXXS

Thyristor-Diode Modules



Dimensions SOT-227(ISOTOP)



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
STD40G08S	900	800
STD40G12S	1300	1200
STD40G14S	1500	1400
STD40G16S	1700	1600
STD40G18S	1900	1800

Symbol	Test Conditions	Maximum Ratings	Unit
I _{TRMS} , I _{FRMS} I _{TAVM} , I _{FAVM}	T _{VJ} =T _{VJM} T _C =85°C; 180° sine	62 40	A
I _{TSM} , I _{FSM}	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	500 440	A
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	450 490	
∫i ² dt	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	1250 1220	A ² s
	T _{VJ} =T _{VJM} V _R =0 t=10ms(50Hz), sine t=8.3ms(60Hz), sine	1010 1010	
(di/dt) _{cr}	T _{VJ} =T _{VJM} f=50Hz, t _p =200us V _D =2/3V _{DRM} I _G =0.45A dig/dt=0.45A/us	repetitive, I _T =150A 150	A/us
		non repetitive, I _T =I _{TAVM} 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} 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} ≤1mA t=1min t=1s	3000 3600	V~
M _d	Mounting torque (M4) Terminal connection torque (M4)	1.5/13 1.5/13	Nm/lb.in.
Weight	Typ.	30	g

Sirectifier®

STD40GXXS

Thyristor-Diode Modules

Symbol	Test Conditions	Characteristic Values	Unit
I_{RRM}, I_{DRM}	$T_{VJ}=T_{VJM}; V_R=V_{RRM}; V_D=V_{DRM}$	5	mA
V_T, V_F	$I_T, I_F=80A; T_{VJ}=25^{\circ}C$	1.68	V
V_{TO}	For power-loss calculations only ($T_{VJ}=125^{\circ}C$)	0.85	V
r_T		5.3	m Ω
V_{GT}	$V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	1.5 1.6	V
I_{GT}	$V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	100 200	mA
V_{GD}	$T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$	0.2	V
I_{GD}		10	mA
I_L	$T_{VJ}=25^{\circ}C; t_p=10\mu s; V_D=6V$ $I_G=0.45A; di_G/dt=0.45A/\mu s$	450	mA
I_H	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	200	mA
t_{gd}	$T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.45A; di_G/dt=0.45A/\mu s$	2	μs
t_q	$T_{VJ}=T_{VJM}; I_T=120A; t_p=200\mu s; -di/dt=10A/\mu s$ $V_R=100V; dv/dt=20V/\mu s; V_D=2/3V_{DRM}$ typ.	150	μs
Q_S	$T_{VJ}=T_{VJM}; I_T, I_F=50A; -di/dt=0.64A/\mu s$	90	μC
I_{RM}		11	A
R_{thJC}	per thyristor/diode; DC current	0.6	K/W
R_{thJK}	per thyristor/diode; DC current	0.7	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

- * International standard package SOT-227
- * Glass passivated chips
- * Isolation voltage 3600 V~
- * RoHs compliant

APPLICATIONS

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

ADVANTAGES

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