ShiLing® 浙江世菱半导体有限公司
ZHEJIANG SHILING SEMICONDUCTOR CO.,LTD.

产品规格书

Specifcation of products

产品名称:输出可调单相桥

产品型号:QLT35A-H9

浙江世菱半导体有限公司
ZHEJIANG SHILING SEMICONDUCTOR CO.,LTD.

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版本号:05 更新日期:2023.8

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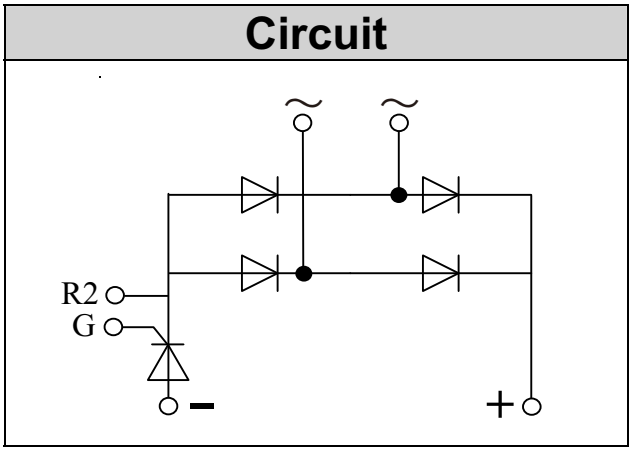
Two Phase Bridge + Thyristor

V_{RRM} / V_{DRM} 800 to 1800V
I_{FAV} / I_{TAV} 35A

Circuit



Features
- Blocking voltage:800 to 1800V
- Two Phase Bridge and a Thyristor
- Isolated Module package

Applications
- Inverter for AC or DC motor control
- Current stabilized power supply
- Switching power supply

Module Type

TYPE	V_{RRM} /V_{DRM}	V_{RSM}
QLT35A800VH9	800V	900V
QLT35A1200VH9	1200V	1300V
QLT35A1600VH9	1600V	1700V
QLT35A1800VH9	1800V	1900V

◆Diode

Maximum Ratings

Symbol	Item	Conditions	Values	Units
I_D	Output Current(D.C.)	Tc=101℃ Three phase full wave	35	A
I_{FSM}	Surge forward current	t=10mS Tvj =45℃	420	A
i^2t	Circuit Fusing Consideration		1960	A^2s
Visol	Isolation Breakdown Voltage(R.M.S)	a.c.50HZ;r.m.s.;1min	2500	V
Tvj	Operating Junction Temperature		-40 to +150	℃
Tstg	Storage Temperature		-40 to +125	℃
Mt	Mounting Torque	To terminals	----	Nm
Ms		To heatsink(M4)	2±5%	Nm
Weight		Module（Approximately）	210	g

Thermal Characteristics

Symbol	Item	Conditions	Values	Units
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to Case(TOTAL)	0.02	℃/W
Rth(c-s)	Thermal Impedance, max.	Case to Heatsink	0. 01	℃/W

Electrical Characteristics

Symbol	Item	Conditions	Values	Units
V_{FM}	Forward Voltage Drop, max.	T=25℃ I_F =105A	1.20	V
I_{RRM}	Repetitive Peak Reverse Current, max.	T_{vj} =25℃ V_{RD}=V_{RRM} T_{vj} =150℃ V_{RD}=V_{RRM}	≤0.1 ≤1	mA mA

◆Two

Maximum Ratings

Symbol	Item	Conditions	Values	Units
I_{TAV}	Average On-State Current	Tc=99℃, Single Phase half wave 180° conduction	35	A
I_{TSM}	Surge On-State Current	TVJ=45℃ t=10ms (50Hz), sine VR=0	420	A
i^2t	Circuit Fusing Consideration		1960	A^2s
Visol	Isolation Breakdown Voltage(R.M.S)	a.c.50HZ;r.m.s.;1 min	2500	V
Tvj	Operating Junction Temperature		-40 to +125	℃
Tstg	Storage Temperature		-40 to +125	℃
Mt	Mounting Torque	To terminals	---	Nm
Ms		To heatsink	---	Nm
di/dt	Critical Rate of Rise of On-State Current	$T_{VJ}=T_{VJM}$, $V_D=1/2V_{DRM}$,I_G =100mA d_{iG}/d_t=0.1A/μs	110	A/μs
dv/dt	Critical Rate of Rise of Off-State Voltage, min.	$T_J=T_{VJM}$,$V_D=2/3V_{DRM}$,linear voltage rise	500	V/μs

Electrical and Thermal Characteristics

Symbol	Item	Conditions	Values			Units
			Min.	Typ.	Max.	
V_{TM}	Peak On-State Voltage, max.	T=25℃ I_T=100A		1.45	V	
I_{RRM}/I_{DRM}	Repetitive Peak Reverse Current, max. / Repetitive Peak Off-State Current, max.	$T_{VJ}=T_{VJM}$,$V_R=V_{RRM}$,$V_D=V_{DRM}$		5	mA	
V_{GT}	Gate Trigger Voltage, max.	T_{VJ} =25℃ , V_D =6V		0. 7	V	
I_{GT}	Gate Trigger Current, max.	T_{VJ} =25℃ , V_D =6V		18	mA	
Rth(j-c)	Thermal Impedance, max.	Junction to Case			0.05	℃/W
Rth(c-s)	Thermal Impedance, max.	Case to Heatsink			0.01	℃/W

Performance Curves

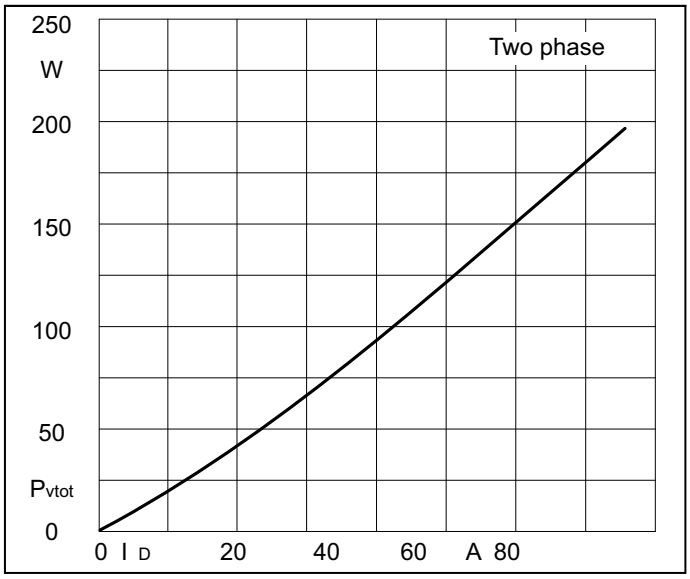


Fig1. Power dissipation

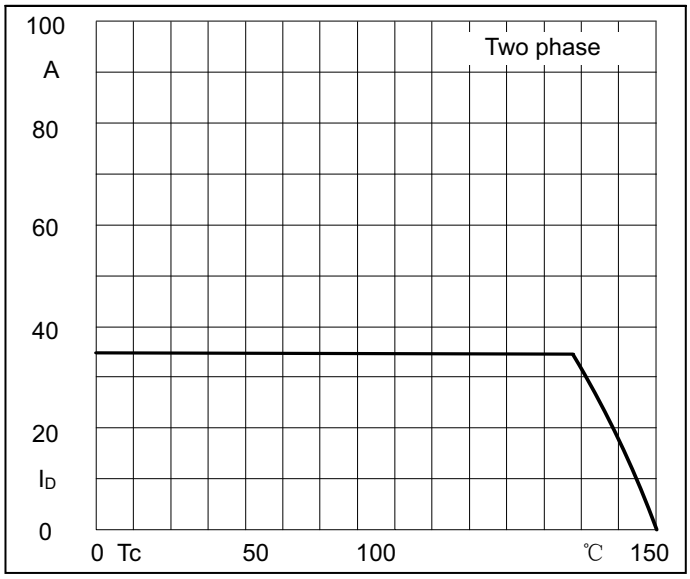


Fig2. Forward Current Derating Curve

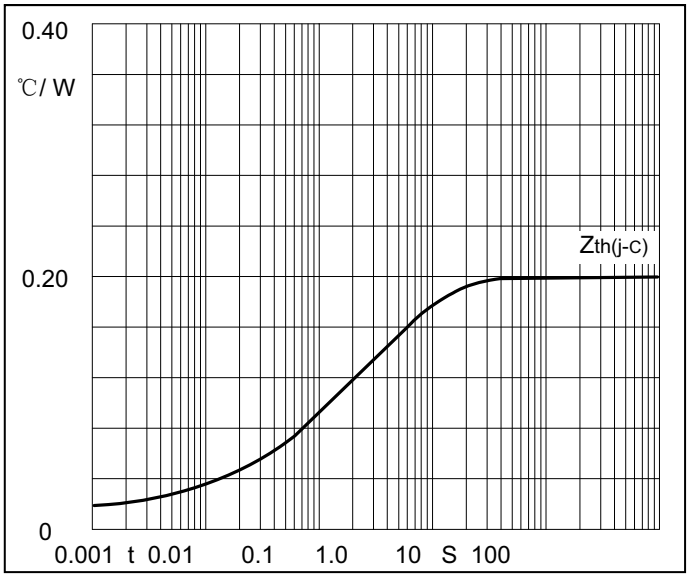


Fig3. Transient thermal impedance

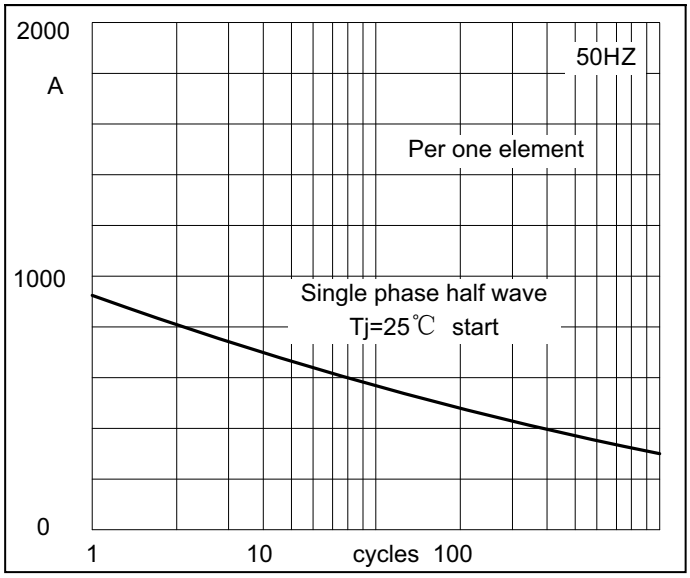


Fig4. Max Non-Repetitive Forward Surge Current

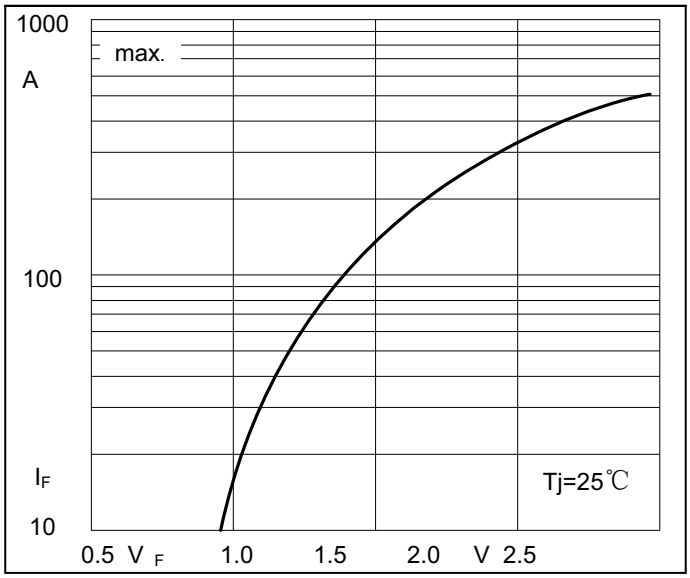


Fig5. Forward Characteristics

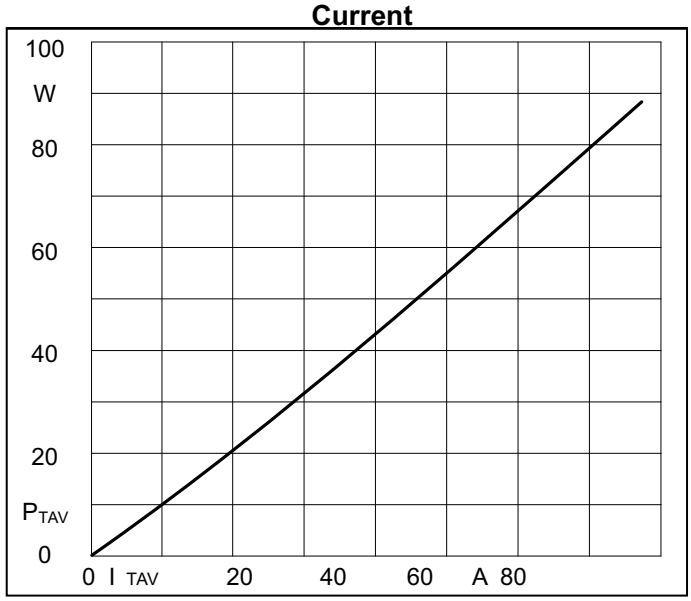


Fig6.SCR Power dissi pation

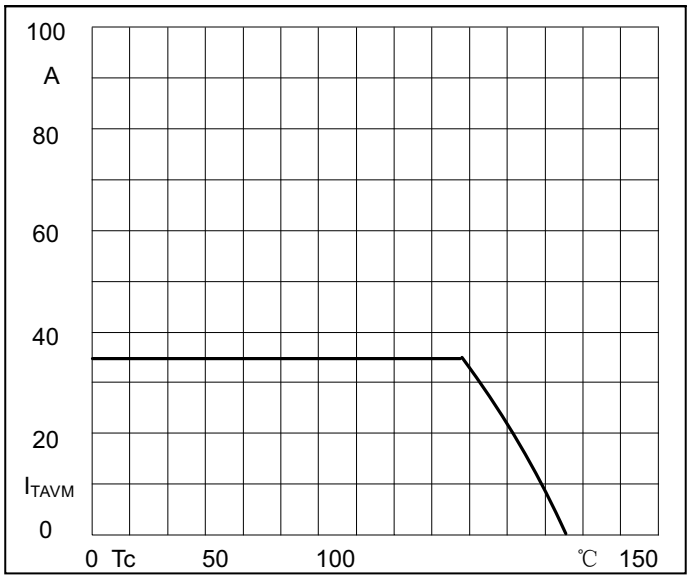


Fig7. SCR Forward Current Derating Curve

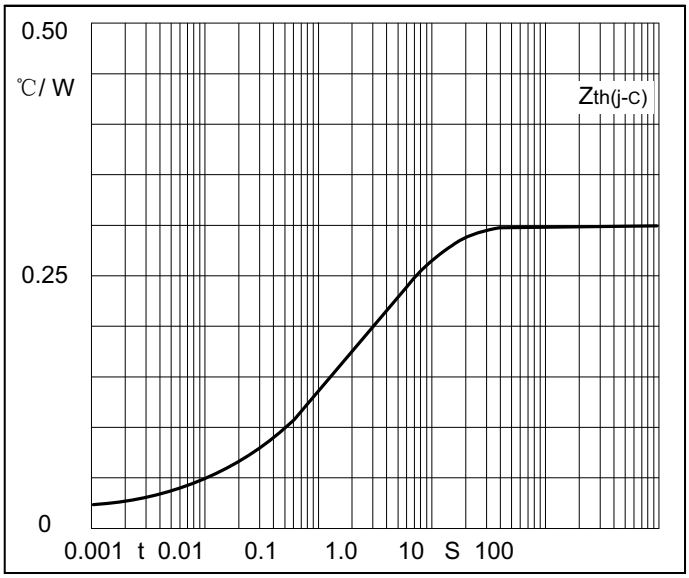


Fig8. SCR Transient thermal impedance

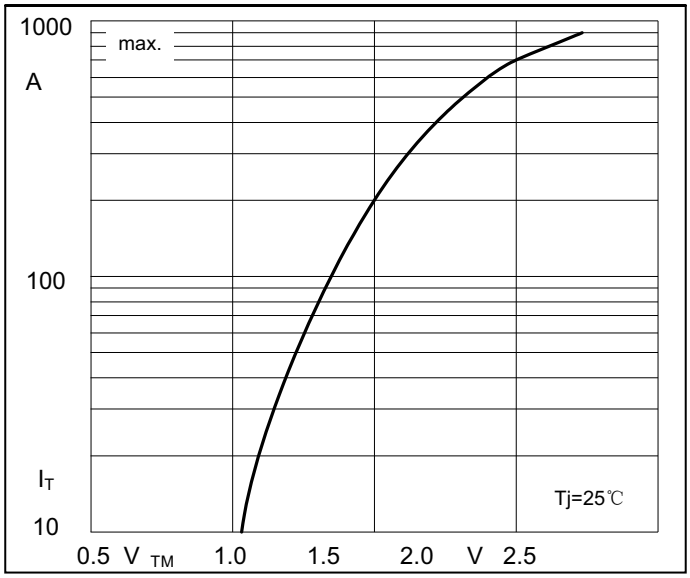


Fig9. SCR Forward Characteristics

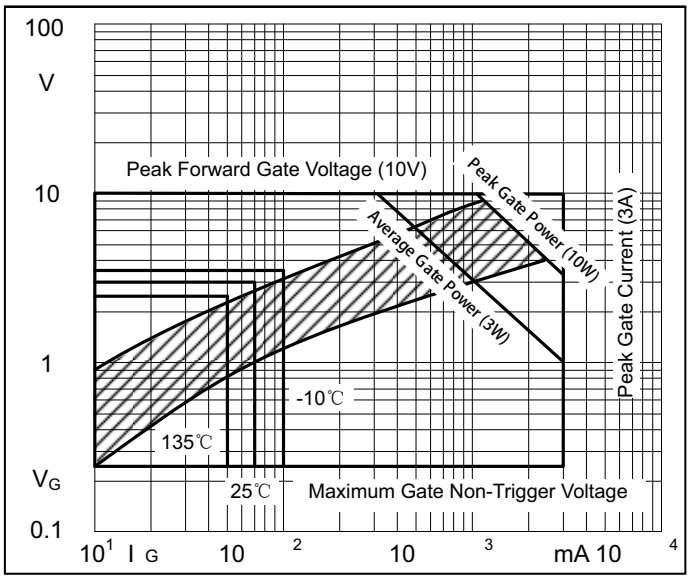
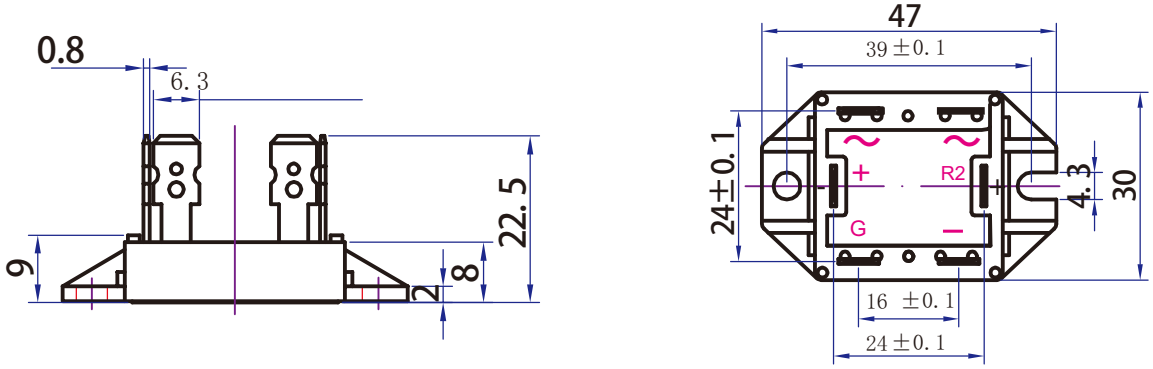


Fig10. Gate trigger Characteristics

Package Outline Information



Dimensions / **Ma** in mm