



- Low profile PCB Mounting
- Single-phase semi-controlled rectifier module.
- Isolation Voltage 3000V.
- DC Output Current = 25A
- AC/DC motor control
- Heating Control
- Lamp Dimmers
- Inverters



Electrical specifications

Maximum DC Output Current ($T_c = 85^\circ\text{C}$) (Single phase full rectifier)	I_D	25A
Maximum Repeated Peak Reverse Voltage	V_{RRM}	1200V
Maximum Non Repeated Peak Reverse Voltage	V_{RSM}	1300V
Maximum Off-State Repeated Peak Voltage	V_{DRM}	1200V
Operating Junction temperature Range	T_J	-40 to +125°C
Critical Rate of Rise of On-State Current ($T_J = 25^\circ\text{C}$)	di/dt	150A / μs
Critical Rate of Rise of Off-State Voltage ($T_J = 125^\circ\text{C}$, $V_D = 2/3V_{DRM}$)	dv/dt	500V / μs
AC Line Input Voltage (Repetitive Peak Reverse Voltage)	V_{rms}	480V
Maximum Non Repeated Surge Current (10ms, 50Hz Sine, $T_J = 45^\circ\text{C}$)	I_{TSM}	280A
Maximum I^2T for Fusing	I^2T	390A ² s
Gate Trigger Current ($T_J = 25^\circ\text{C}$, $V_D = 12V$, $I_T = 1A$)	I_{GT}	20 to 150mA
Gate Trigger Voltage ($T_J = 25^\circ\text{C}$, $V_D = 12V$, $I_T = 1A$)	V_{GT}	0.7 - 1.8V
Average Gate Power	$P_{G(AV)}$	0.5W
Peak Gate Power	P_{GM}	10W
Thermal Impedance (Single side, half Sine)	$R_{th(j-c)}$	0.40°C/W
Isolation Voltage (AC, 1 Minute)	V_{ISO}	3000V
Thyristor On-state Peak Voltage ($I_{TM} = 37.5A$, $T_J = 25^\circ\text{C}$)	V_{TM}	1.6V
Diode Forward Peak Voltage ($I_{TM} = 37.5A$, $T_J = 25^\circ\text{C}$)	V_{FM}	1.4V

General Data

Ambient Storage Temperature	T_{stg}	-40 to +125°C
Weight	W_i	12g

Ordering Code

D5 2 2 F

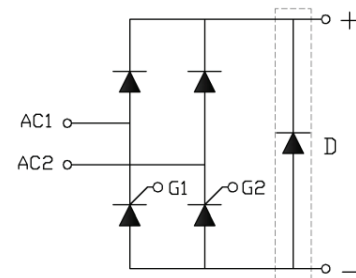
Series

Circuit type
2: see below

AC Line Voltage
2: 240V to 480V

Free Wheel Diode
NIL : No diode (D)
F: Free wheel diode (D)

Circuit Diagram



Performance Graphs

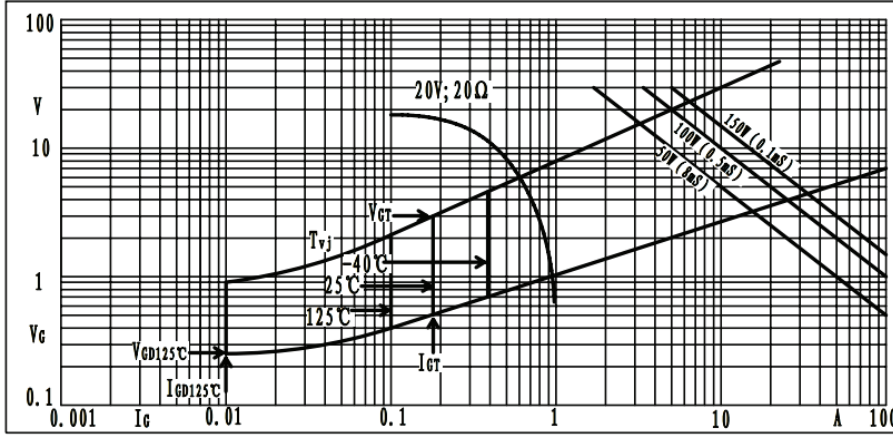


Fig1. Gate trigger characteristics

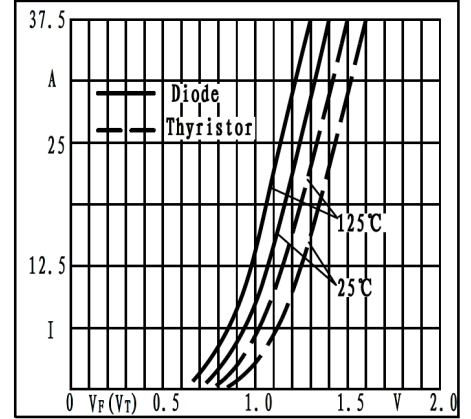


Fig2. Forward characteristics

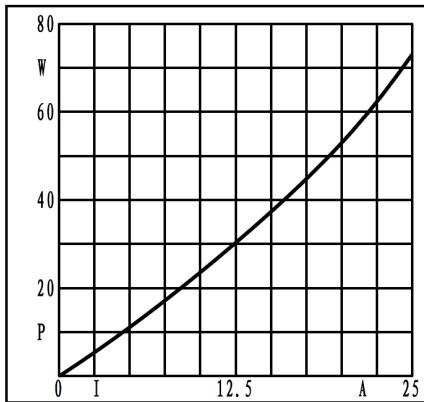


Fig3. Power dissipation

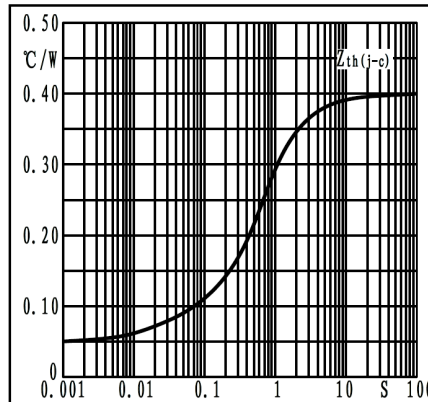


Fig4. Transient thermal impedance

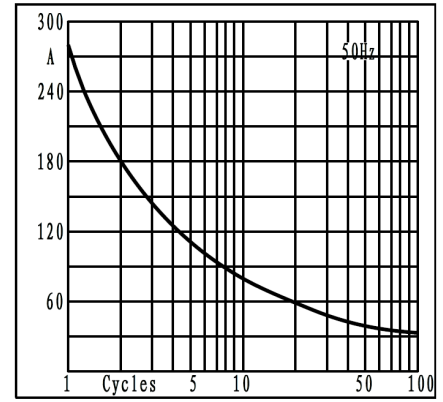


Fig5. Max non-repetitive forward surge current

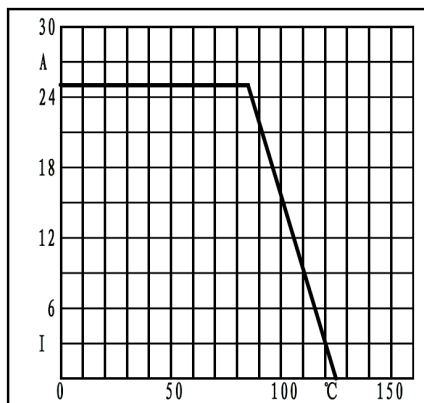


Fig6. Forward current derating curve

Dimensions (mm)

Fig 2

