



Glass Passivated Rectifier Diode Modules

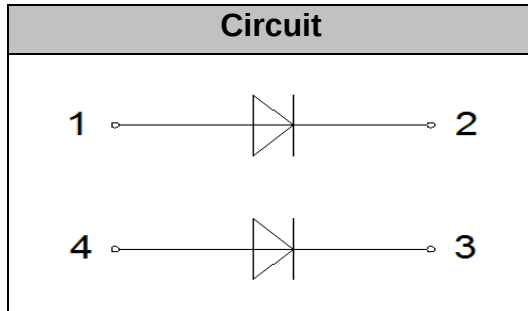
V_{RRM} 800 to 1800V
I_{FAV} 30 A

Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

Features

- Blocking voltage: 800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip



Module Type

TYPE	V _{RRM}	V _{RSM}
MD30DU08DA	800V	900V
MD30DU12DA	1200V	1300V
MD30DU16DA	1600V	1700V
MD30DU18DA	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{FAV}	Single phase, half wave 180° conduction T _c =104°C	30	A
I _{FSM}	t=10mS T _{vj} =45°C	650	A
i ² t	t=10mS T _{vj} =45°C	2100	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T _{vj}		-40 to +150	°C
T _{stg}		-40 to +125	°C
Mt	To terminals(M4)	2±15%	Nm
Ms	To heatsink(M5)	4±15%	Nm
Weight	Module (Approximately)	47	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	1.0	°C/W
R _{th(c-s)}	Module	0.1	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25°C I _F =100A	—	1.2	1.25	V
I _{RD}	T _{vj} =150°C V _{RD} =V _{RRM}	—	—	5	mA



Performance Curves

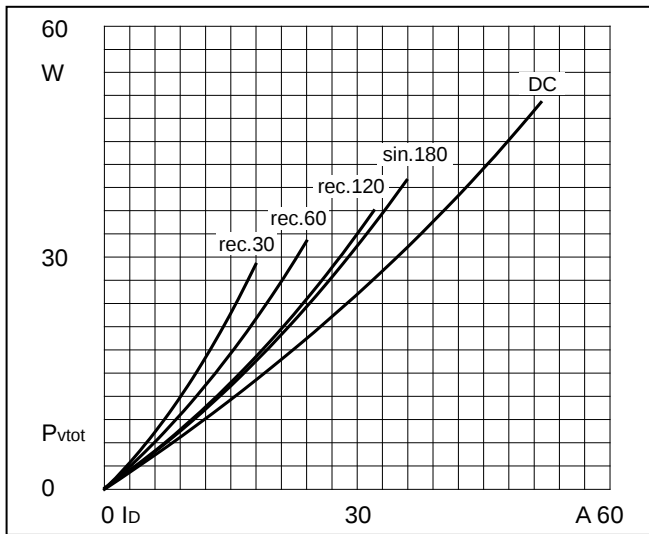


Fig1. Power dissipation

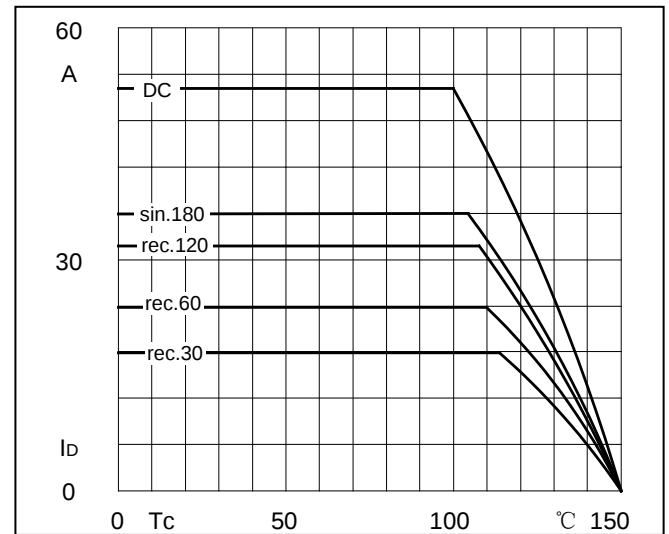


Fig2. Forward Current Derating Curve

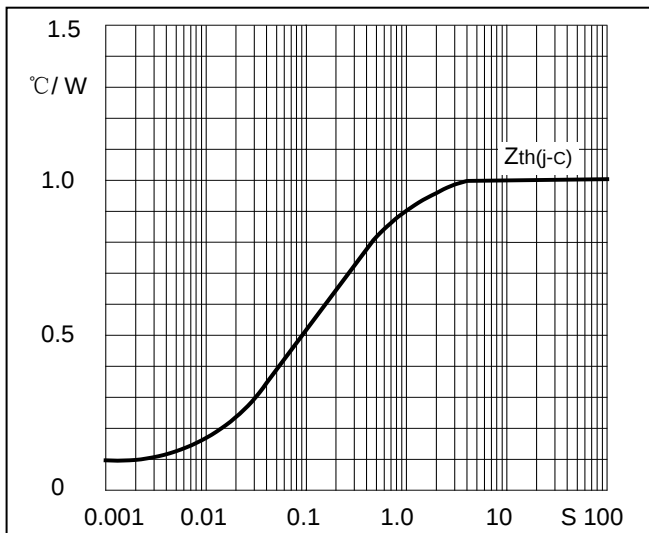


Fig3. Transient thermal impedance

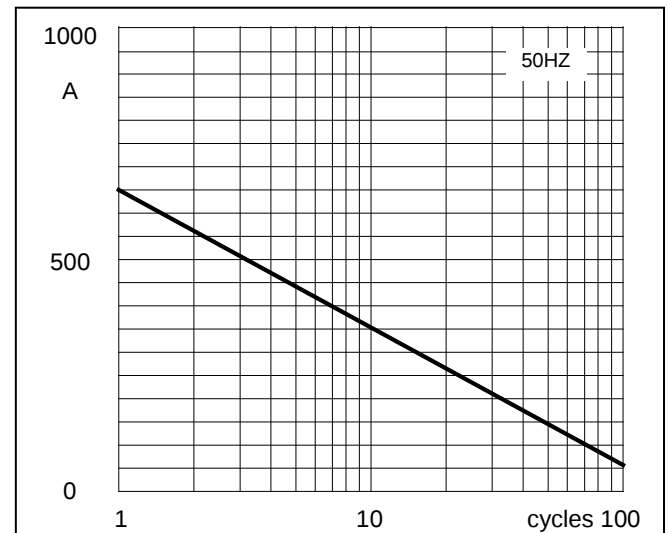


Fig4. Max Non-Repetitive Forward Surge Current

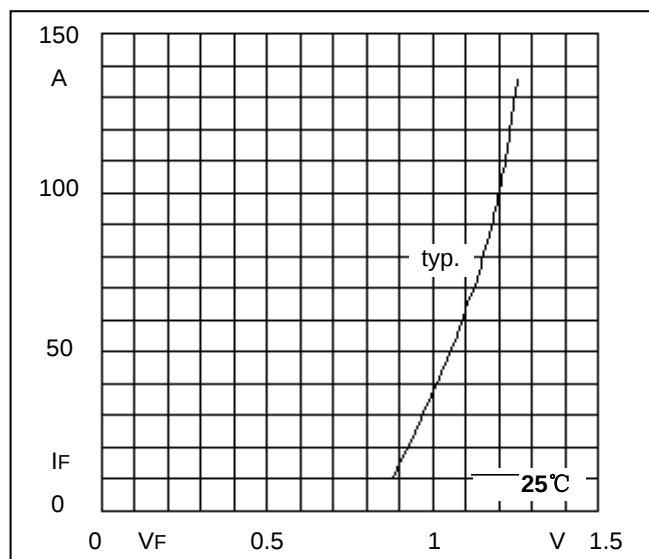
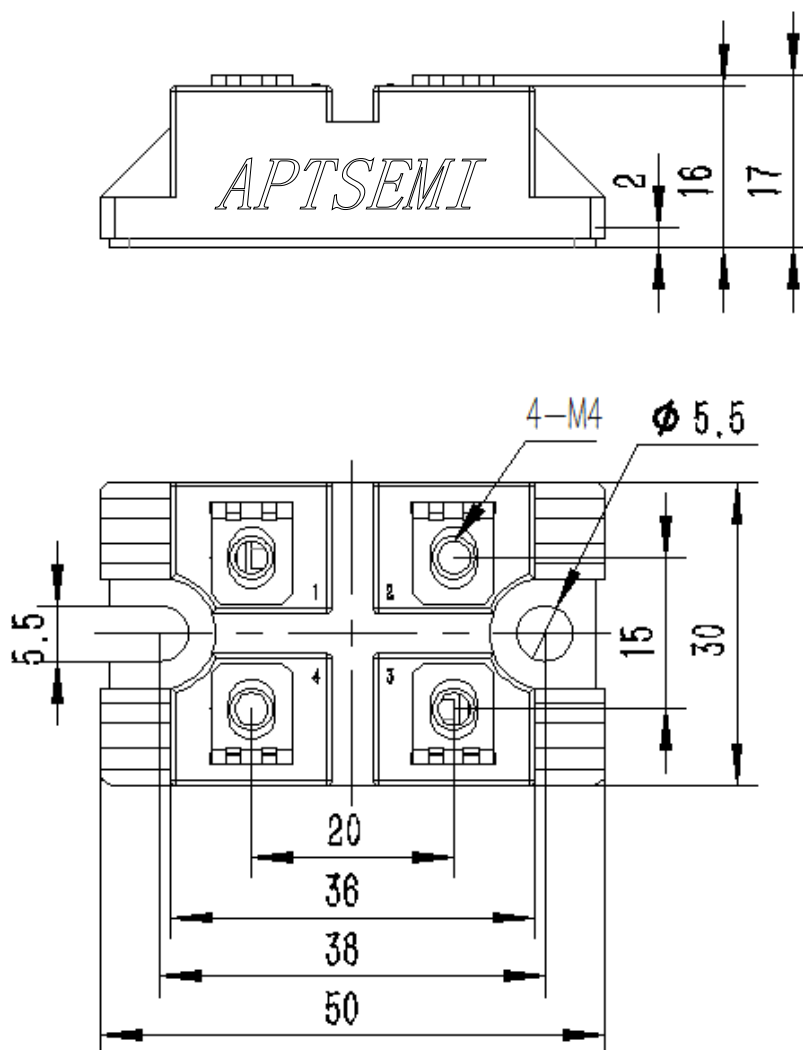


Fig5. Forward Characteristics



Package Outline Information

CASE: DA



Dimensions in mm