



Glass Passivated Rectifier Diode Modules

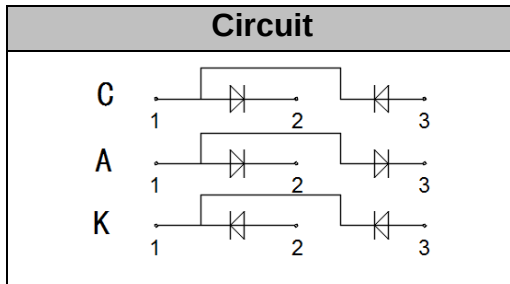
V_{RRM} 800 to 1800V
I_{FAV} 36 A

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}
MD36C08D1N	MD36A08D1N	MD36K08D1N	800V	900V
MD36C12D1N	MD36A12D1N	MD36K12D1N	1200V	1300V
MD36C16D1N	MD36A16D1N	MD36K16D1N	1600V	1700V
MD36C18D1N	MD36A18D1N	MD36K18D1N	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{FAV}	Single phase ,half wave 180° conduction T _c =105℃	36	A
I _{FSM}	t=10mS T _{vj} =45℃	650	A
i ² t	t=10mS T _{vj} =45℃	2100	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T _{vj}		-40 to +150	℃
T _{stg}		-40 to +125	℃
M _t	To terminals(M5)	3±15%	Nm
M _s	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	114	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	0.58	℃/W
R _{th(j-c)}	Per Module	0.29	℃/W
R _{th(c-s)}	Module	0.1	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25℃ I _F =75A	—	1.0	1.18	V
V _{FM}	T=25℃ I _F =100A	—	1.25	1.40	V
I _{RD}	T _{vj} =150℃ V _{RD} =V _{RRM}	—	—	5	mA



Performance Curves

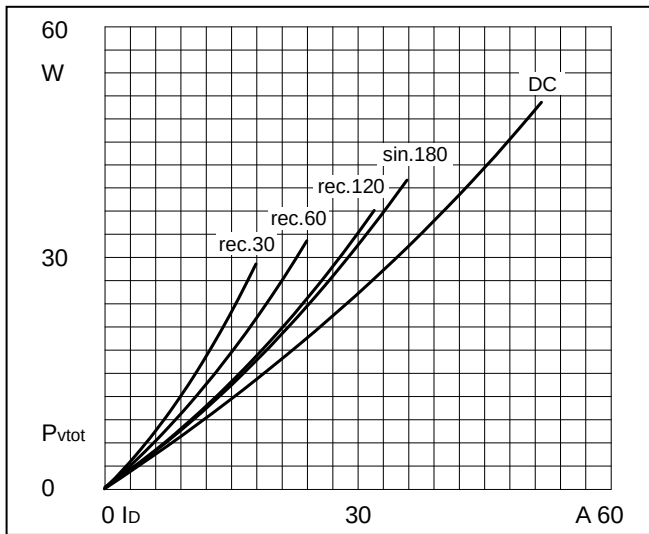


Fig1. Power dissipation

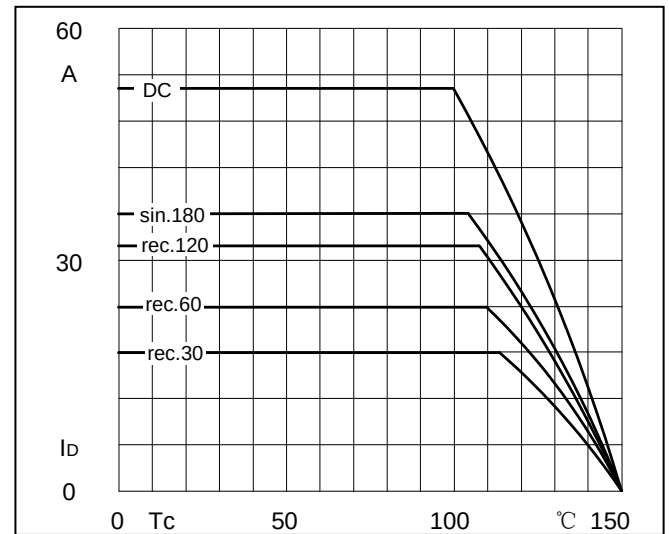


Fig2. Forward Current Derating Curve

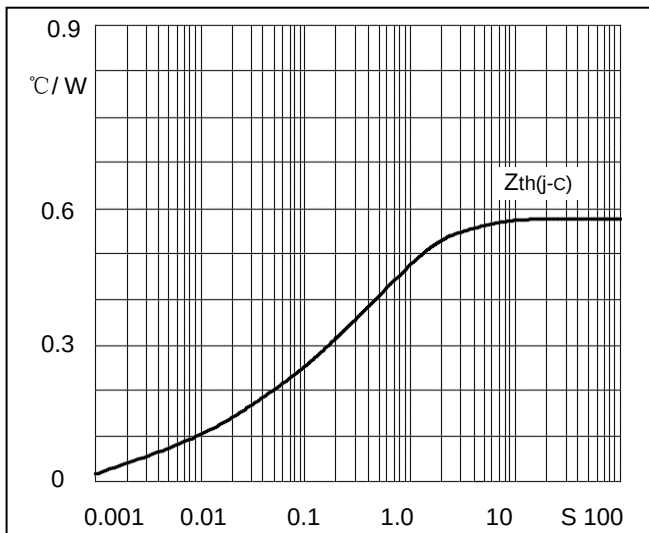


Fig3. Transient thermal impedance

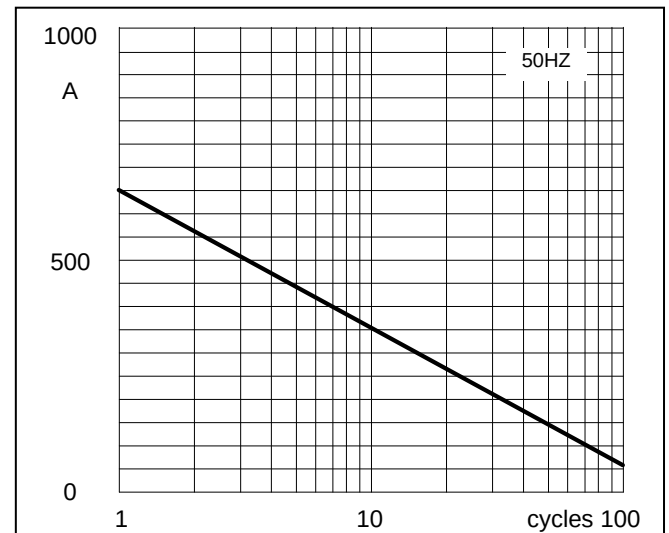


Fig4. Max Non-Repetitive Forward Surge Current

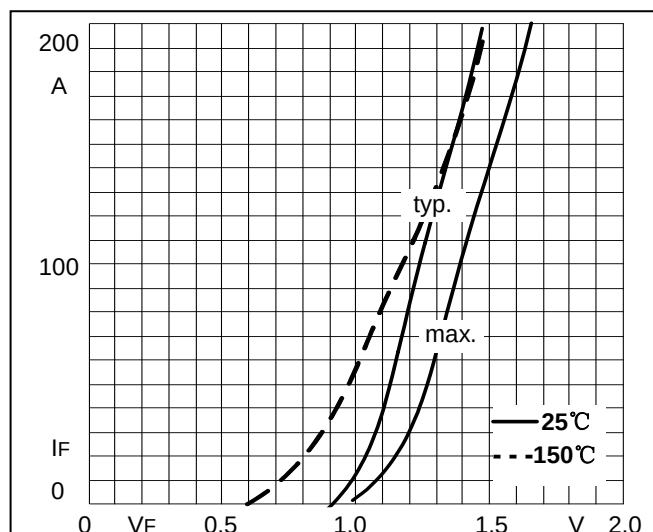
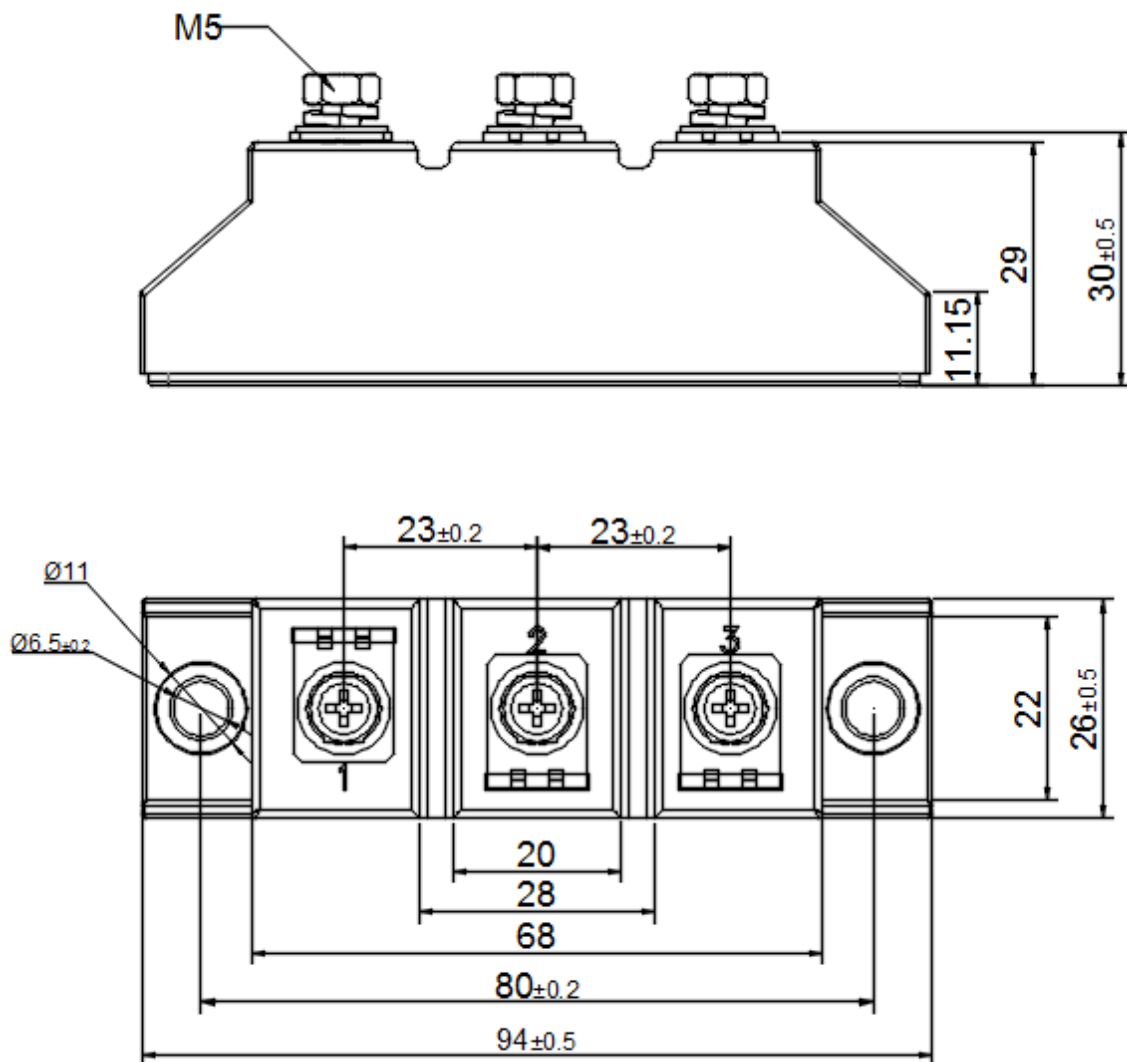


Fig5. Forward Characteristics

Package Outline Information

CASE: D1N



Dimensions in mm