



Glass Passivated Rectifier Diode Modules

VRRM 1600V
IFAV 130 A

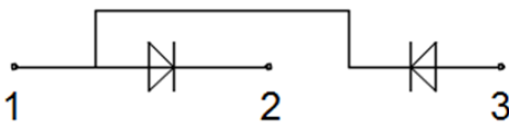
Applications

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

Features

- Blocking voltage:1600V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Circuit



Module Type

TYPE	VRRM	VRSM
MD130C16D1N	1600V	1700V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=100℃	130	A
IFSM	t=10ms Tvj =45℃	4000	A
i ² t	t=10ms Tvj =45℃	80000	A ² s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +150	℃
Tstg		-40 to +125	℃
Mt	To terminals(M5)	3±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	115	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per diode	0.26	℃/W
	Per Module	0.13	℃/W
Rth(c-s)	Per Module	0.1	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
VFM	T=25℃ IF =300A	—	1.20	1.35	V
IRD	Tvj=150℃ VRD=VRRM	—	—	6	mA



Performance Curves

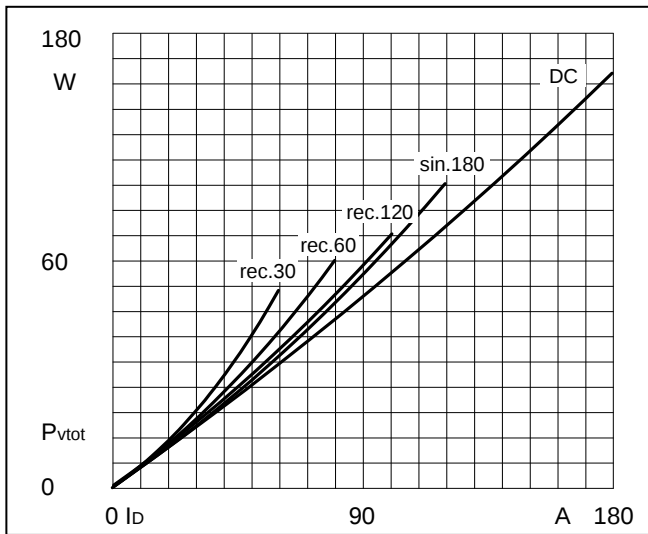


Fig1. Power dissipation

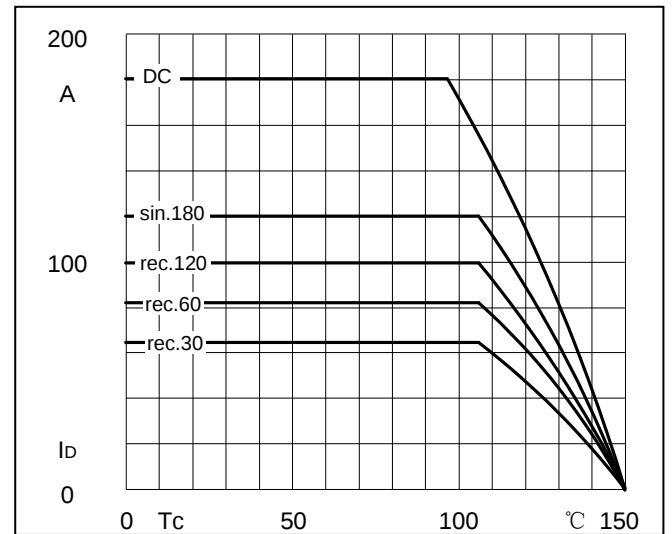


Fig2. Forward Current Derating Curve

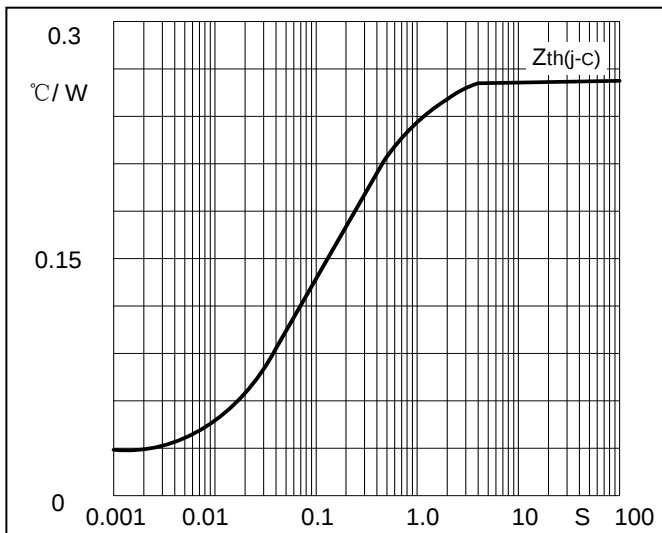


Fig3. Transient thermal impedance

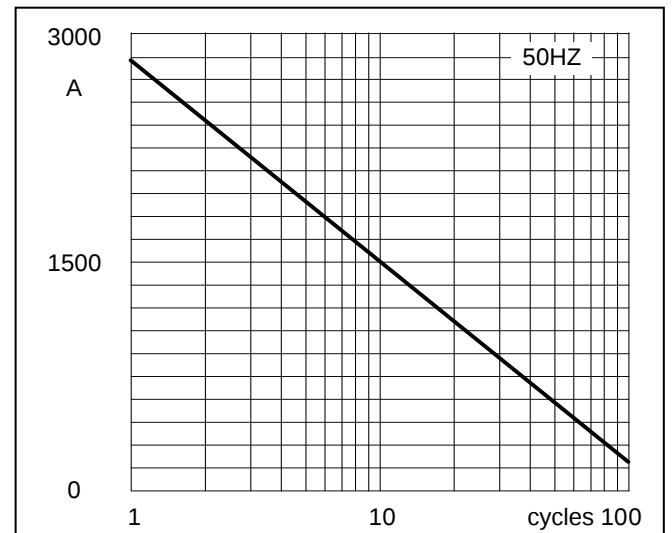


Fig4. Max Non-Repetitive Forward Surge Current

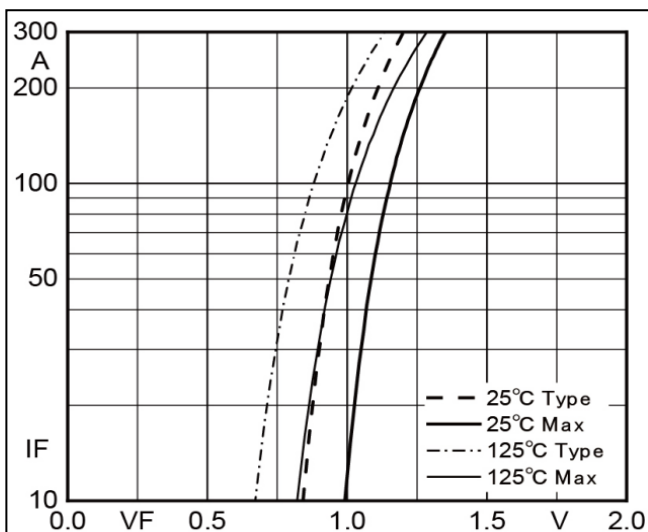
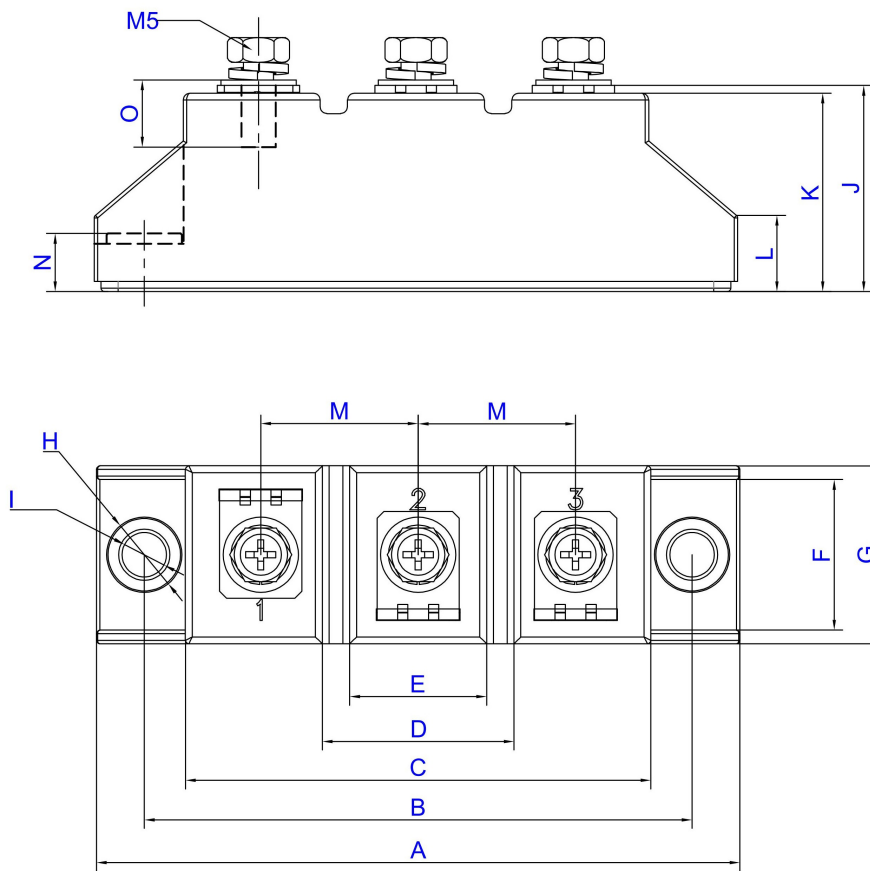


Fig5. Forward Characteristics

Package Outline Information

CASE: D1N



DIM	Min (mm)	Max (mm)	Note
A	93.5	94.5	
B	79.8	80.2	
C	67.5	68.5	
D	27.5	28.5	
E	19.5	20.5	
F	21.5	22.5	
G	25.5	26.5	
H	10.5	11.5	Ø
I	6.0	7.0	Ø
J	29.5	30.5	
K	28.5	29.5	
L	10.7	11.7	
M	22.5	23.5	
N	8.0	9.0	
O	9.0	10.0	

Packing Standard

Item	Length: A (mm)	Width: B (mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	43	10
Outer Carton	545	295	240	100



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