MD30DU-DA

RoHS COMPLIANT

Glass Passivated Rectifier Diode Modules

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

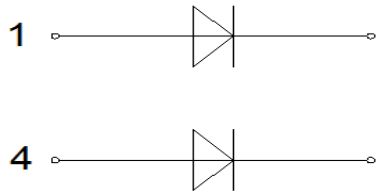
Applications

- 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

Circuit



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 Tc=104℃	30	A
I_{FSM}	t=10mS Tvj =45℃	650	A
i^2t	t=10mS Tvj =45℃	2100	A^2s
Visol	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +150	℃
Tstg		-40 to +125	℃
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	℃/W
$R_{th(c-s)}$	Module	0.1	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T=25℃ I_F=100A	—	1.2	1.25	V
I_{RD}	Tvj=150℃ $V_{RD}=V_{RRM}$	—	—	5	mA

Performance Curves

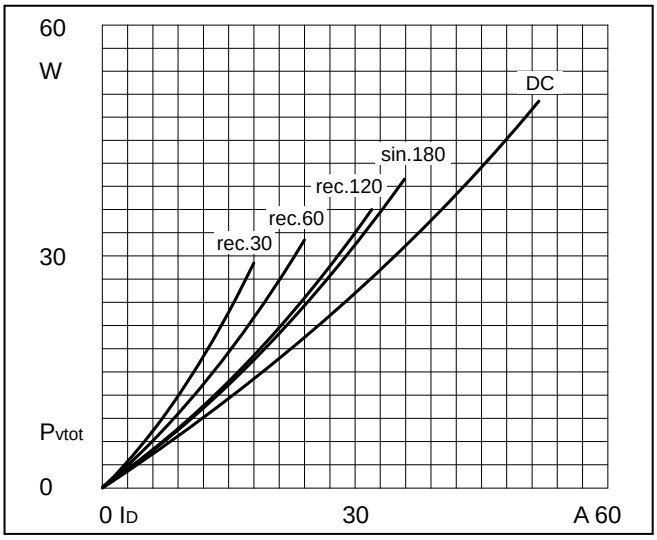


Fig1. Power dissipation

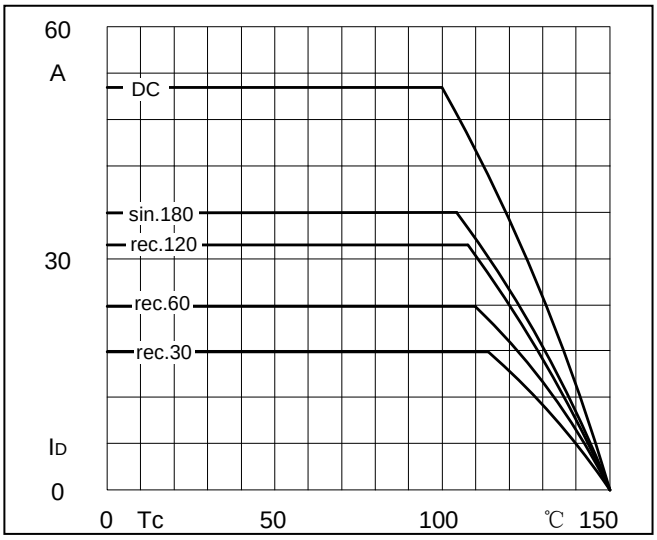


Fig2.Forward Current Derating Curve

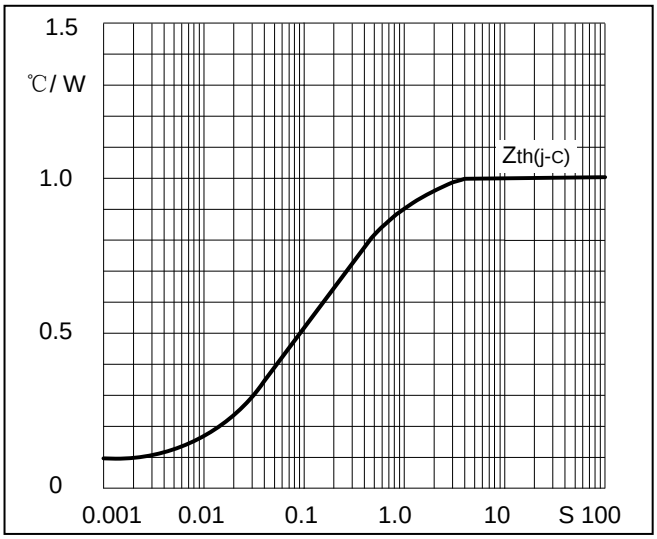


Fig3. Transient thermal impedance

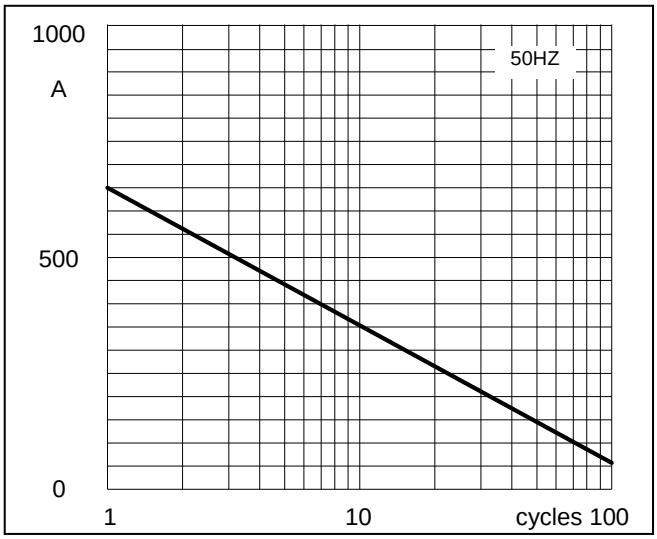


Fig4. Max Non-Repetitive Forward Surge Current

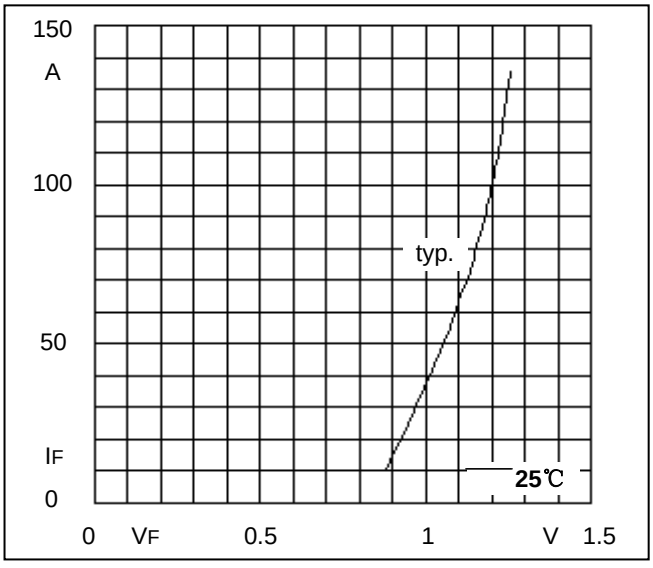
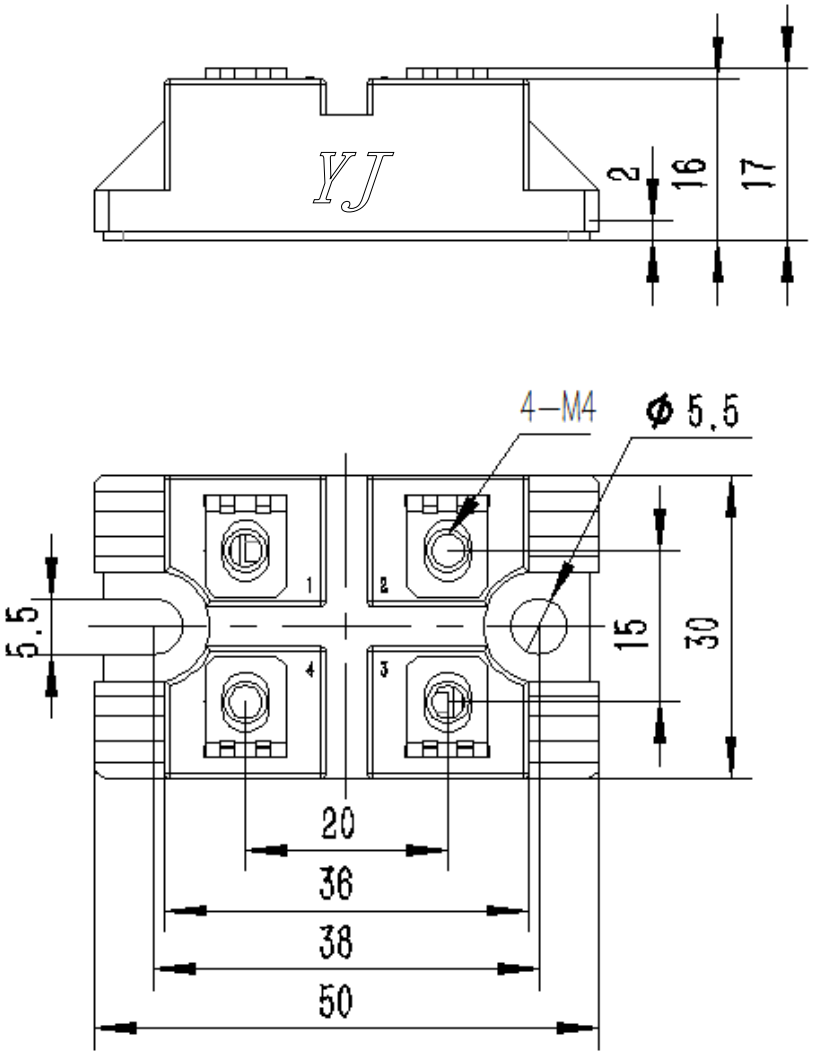


Fig5. Forward Characteristics

Package Outline Information

CASE: DA



Dimensions in mm