

Rectifier Diode Modules

VRRM 800 to 1800V
IFAV 300 Amp

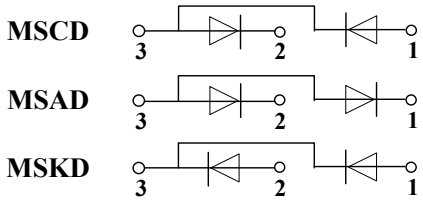
Applications

- 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 nitride ceramic isolated metal baseplate

Circuit



Module Type

TYPE			VRRM	VRSM
MSCD300-08	MSAD300-08	MSKD300-08	800V	900V
MSCD300-12	MSAD300-12	MSKD300-12	1200V	1300V
MSCD300-16	MSAD300-16	MSKD300-16	1600V	1700V
MSCD300-18	MSAD300-18	MSKD300-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{FAV}	Tc=85℃	300	A
I_{FSM}	t=10mS Tvj =45℃	11000	A
i^2t	t=10mS Tvj =45℃	605000	A^2s
V_{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T_{vj}		-40 to +150	℃
T_{stg}		-40 to +125	℃
Mt	To terminals(M8)	9±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module	865	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Module	0.08	℃/W
$R_{th(c-s)}$	Module	0.05	℃/W

Electrical Characteristics

Symbol	Conditions	Values	Units
V_{FM}	T=25℃ I_{FM} =900A	1.8	V
I_{RD}	$T_{vj}=T_{vjM}$ $V_{RD}=V_{RRM}$	≤15	mA

Performance Curves

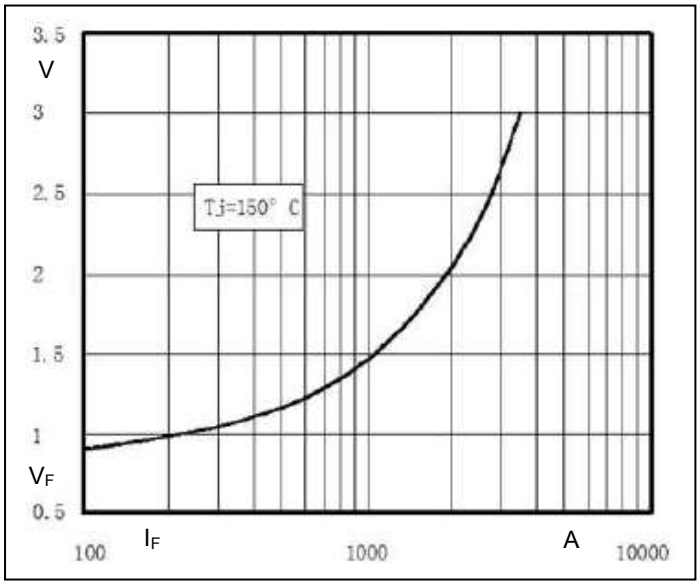


Fig1. Forward Characteristics

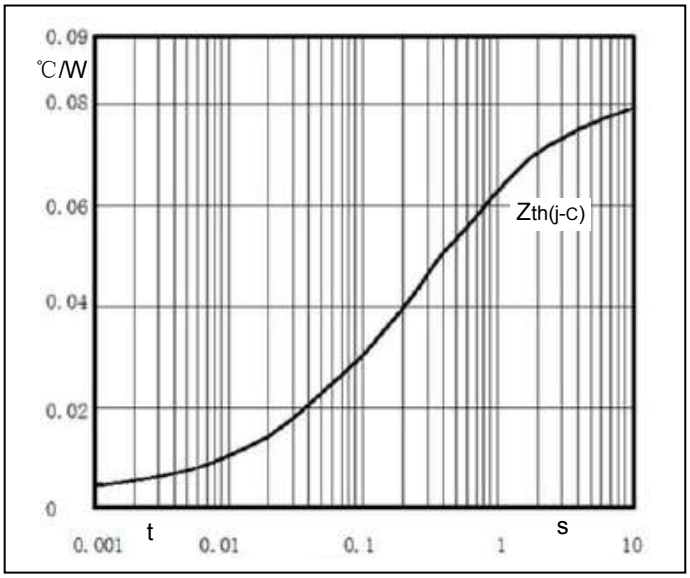


Fig2. Transient thermal impedance

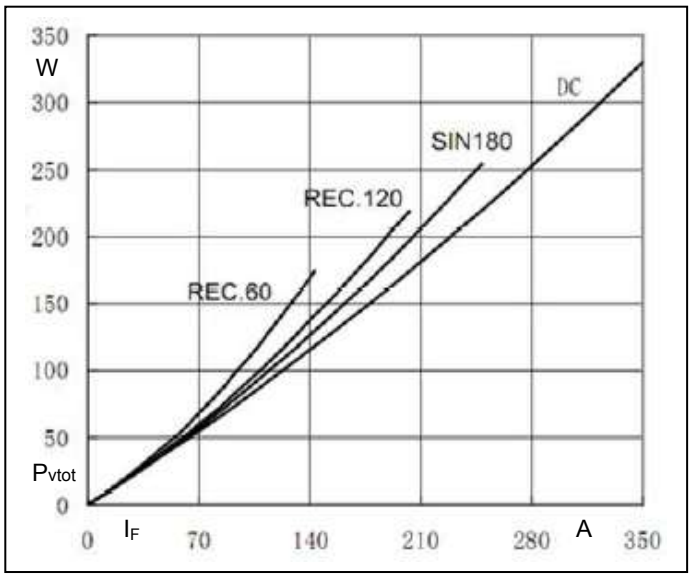


Fig3. Power dissipation

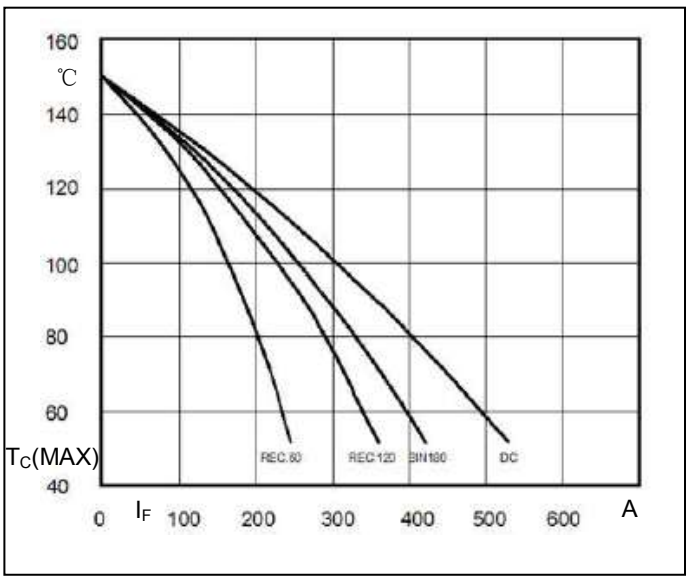


Fig4. case temperatrue vs. forward current

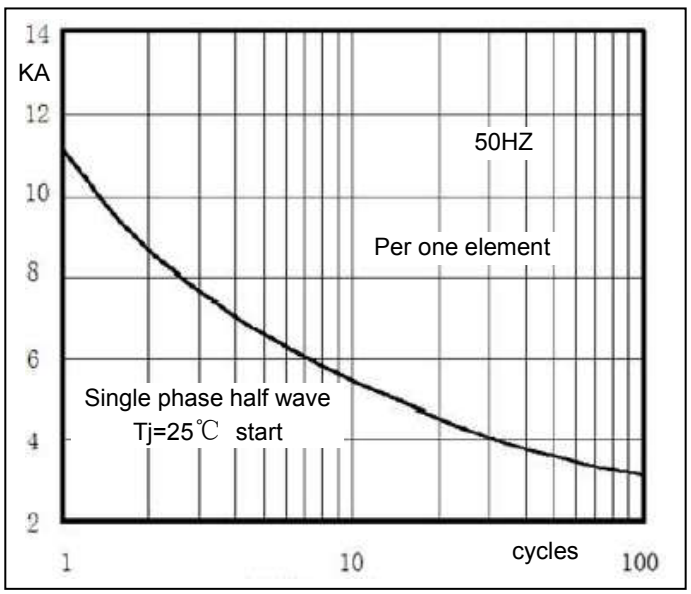
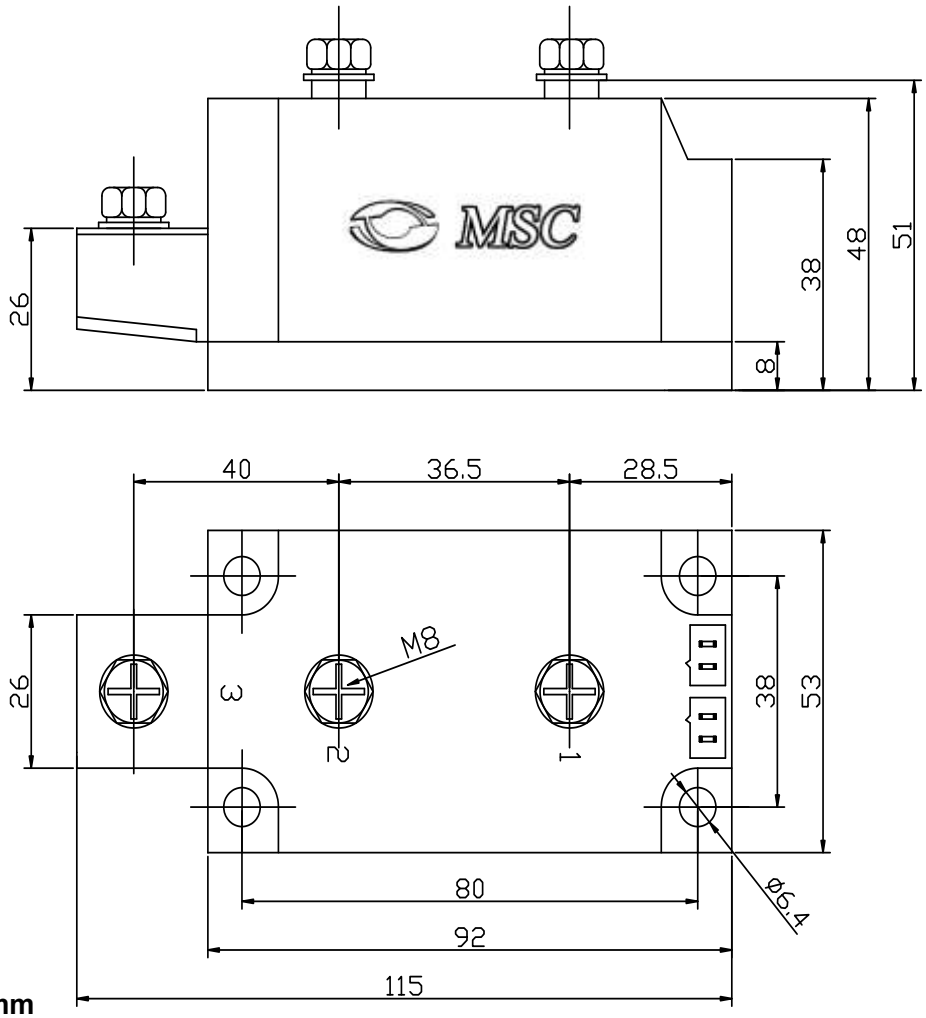


Fig5. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE: D3



Dimensions in mm