



RUNAU

Jiangsu Runau Electronics Manufacturing Co.,Ltd

MDC90 MDA90 MDK90 MDX90

1200-2000V_{RRM}

GENERAL PURPOSE DIODE MODULE

Features:

- . Electrical insulation between chip and base plate, 2500V AC insulation
- . Compress structure
- . Excellent temperature characteristics and power cycling capability
- . Small size & light weight



Typical application:

- . AC / DC motor control
- . Various rectification power supplies
- . Frequency converter

ELECTRICAL CHARACTERISTICS AND RATINGS

Symbol	Parameter	Conditions	Tj(°C)	Data			Unit
				Min	Typ	Max	
I _{F(AV)}	Mean forward current	Sinewave 180°,50Hz Single side cooling, Tc=85°C	125			90	A
I _{F(RMS)}	RMS forward current		125			141	A
V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V _{DRM} &V _{RRM} tp=10ms V _{DSM} &V _{RSM} =V _{DRM} &V _{RRM} +200V	25	1200		2000	V
I _{RRM}	Repetitive peak off-state current	V _{DM} = V _{DRM}	125			5	mA
I _{RRM}	Repetitive peak reverse current	V _{RM} = V _{RRM}					
I _{FSM}	Surge forward current	10ms bottom width, half sine wave	125			2.0	KA
I ² t	I squared t	V _R =0.6V _{RRM}					
V _{FO}	Forward threshold voltage		125			0.8	V
r _F	Slope resistance						
V _{FM}	Peak forward voltage	I _{TM} =270A	25			1.30	V
R _{th(j-c)}	Thermal impedance(junction to case)	180°sine wave, Single side heat dissipation				0.350	°C /W
R _{th(c-h)}	Thermal impedance(case to heatsink)	180°sine wave, Single side heat dissipation				0.15	°C /W
V _{iso}	Insulation voltage	50Hz, R.M.S, t=1min, I _{iso} : 1mA(MAX)		2500			V
F _m	Electrode mounting torque (M6)					4	N·m
	Base plate mounting torque (M6)					6	N·m
T _{stg}	Storage temperature			-40		125	°C
W _t	Weight					160	g

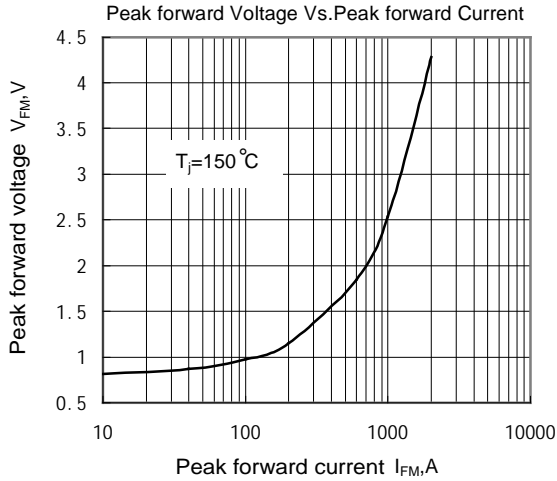


Fig.1 Forward Volt-ampere Characteristic Curve

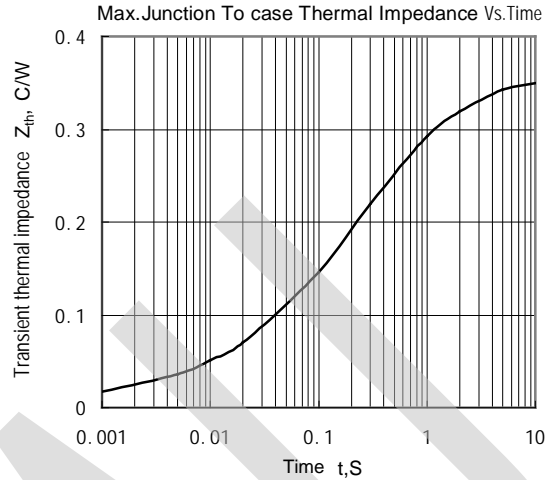


Fig.2 Transient Thermal Impedance Curve

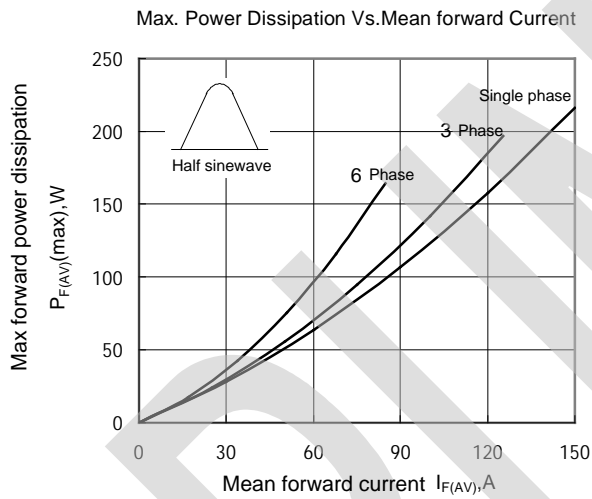


Fig.3 Max Power Dissipation Vs. Mean Forward Current

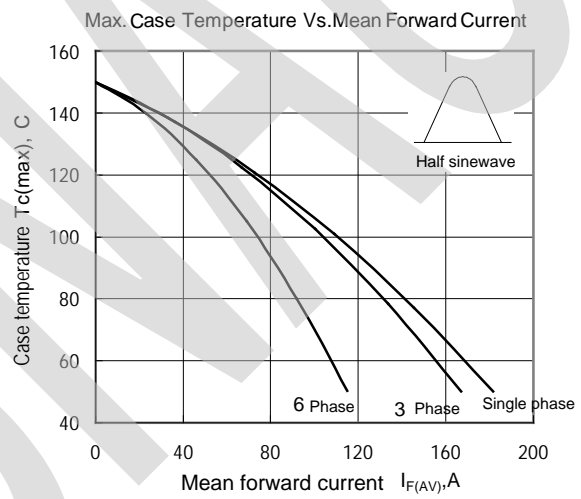


Fig.4 Max Case Temperature Vs. Mean Forward Current

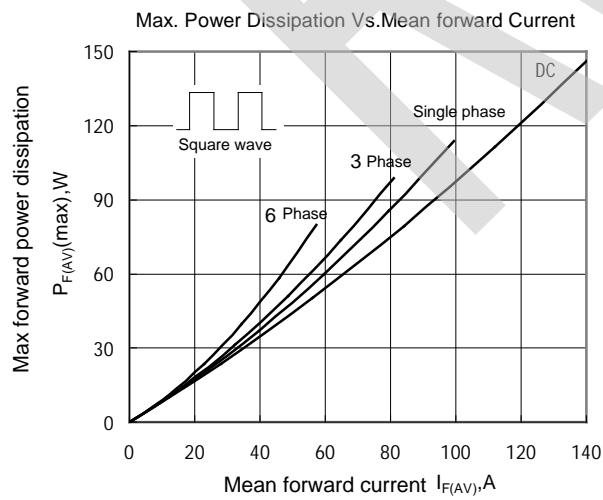


Fig.5 Max Power Dissipation Vs. Mean Forward Current

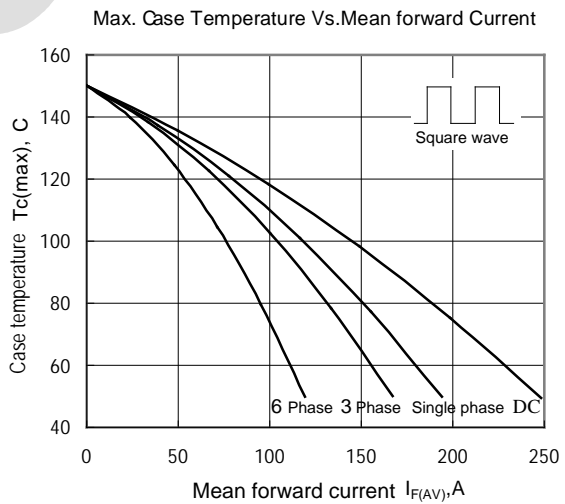


Fig.6 Max Case Temperature Vs. Mean Forward Current

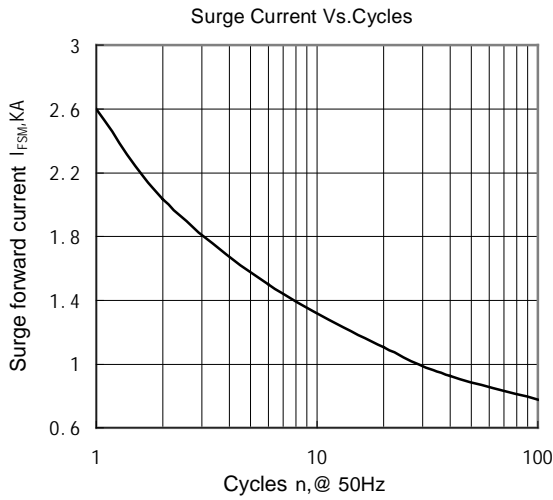


Fig.7 Surge Current Vs.Cycles Curve

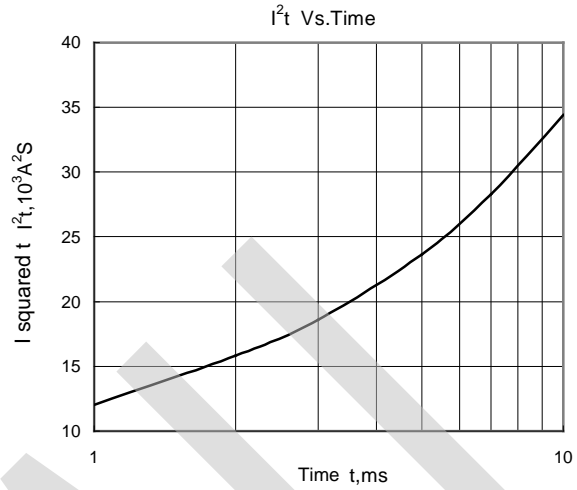
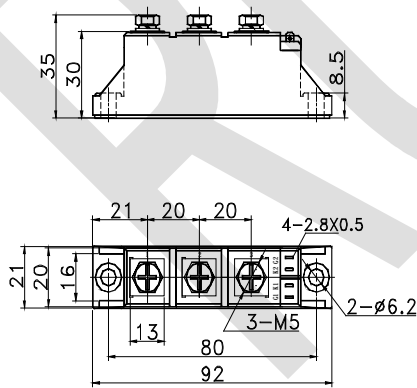


Fig.8 I^2t Vs.Time Curve

OUTLINE



M220F

