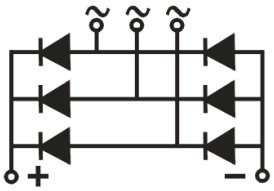
Three Phase Rectifier Module MDS-50

Features

►International standard package
►Blocking voltage up to 1800V
►Low forward voltage drop
►Isolation voltage 2500V



Typical Applications

►DC power suppliers for apparatus device
►Input rectifying power supply for PWM converters
►Inverter welders

Symbol	MDS-50-06F	MDS-50-08F	MDS-50-10F	MDS-50-12F	MDS-50-16F	MDS-50-18F	Unit
V_{RRM}	600	800	1000	1200	1600	1800	V
V_{RSM}	700	900	1100	1300	1800	1900	V

Symbol	Parameter	Test condition	Rating	Unit
I_D	Output DC current	Three-phase whole wave rectifying circuit T_C:100°C	50	A
I_{FSM}	Forward surge current	t=10ms,50Hz,sin,Tjm	750	A
I^2t	I^2t value	V_R = 0.6V_{RRM}， Tjm	2800	A^2S
V_{ISO}	Isolation voltage	AC one min	2500	V
Tj	Operating junction temperature		-40 to +150	°C
Tjm	Rated junction temperature		150	°C
Tstg	Storage temperature		-40 to +150	°C
Rth(j-c)	Thermal impedance (juction-case)	Single-side heat dissipation, sine half- wave	0.56	°C/W
Md	Mounting torque (copper plate) M6		5±15%	N•M
	Mounting torque (terminal) M5		3±15%	N•M
Wt	weight		185	g

Electrical characteristics

Symbol	Parameter	Test condition	Rating			Unit
			Min.	Typ.	Max.	
I_{RRM}	Peak reverse repetitive current	Single-side heat dissipation, V_R=V_{RRM}, sine half wave,Tj=150°C	--	--	5	mA
V_{FM}	Peak forward voltage	I_{FM} =50A, Tj=25°C	--	1.0	1.2	V

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Performance Curves

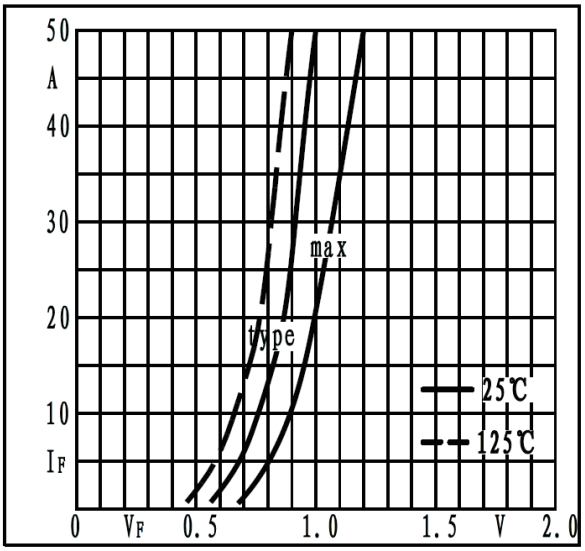

Fig1. Forward characteristics

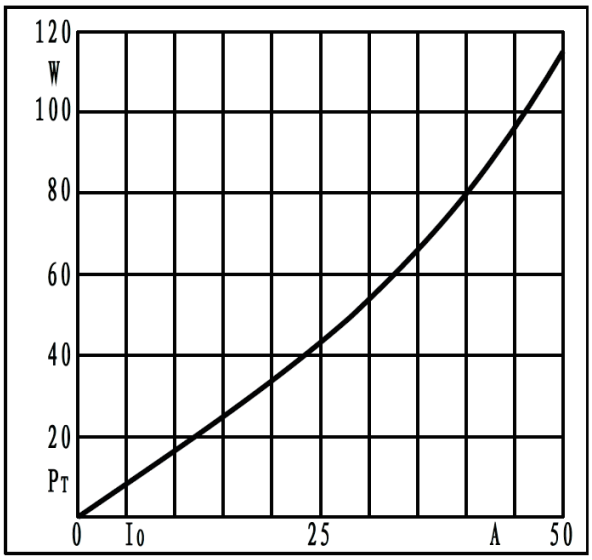

Fig2. Power dissipation

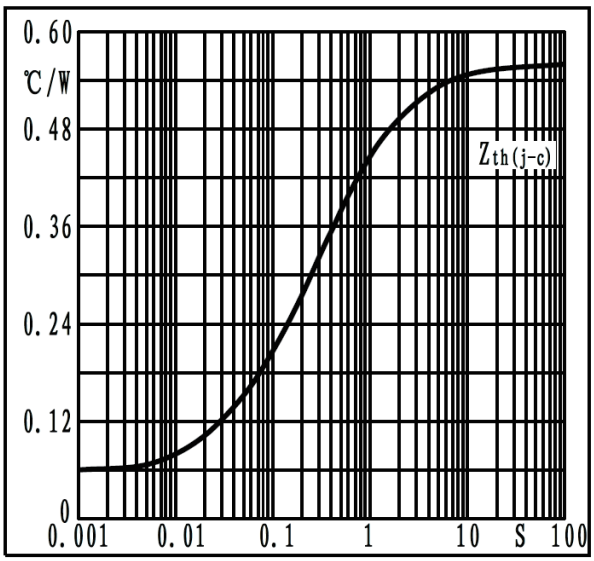

Fig3. Transient thermal impedance

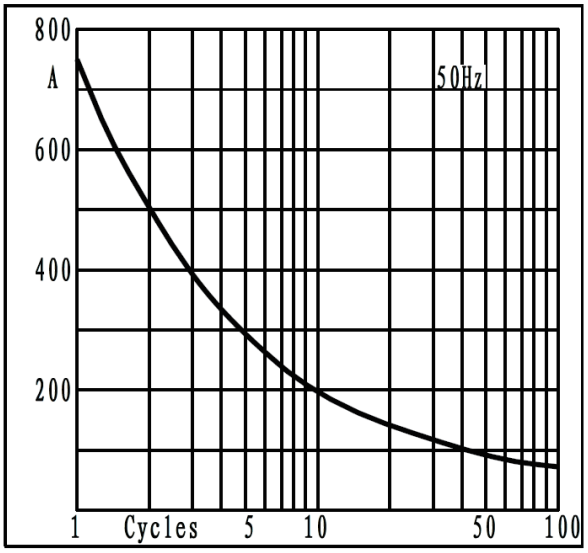

Fig4. Max non-repetitive forward surge current

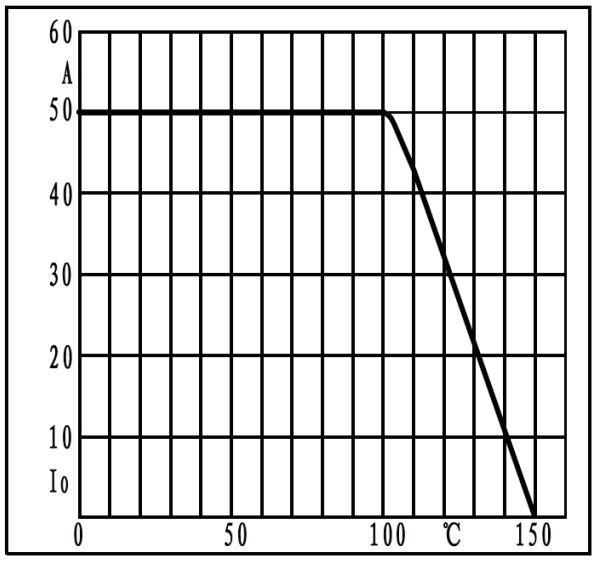

Fig5. Forward current derating curve

Dimensions in mm