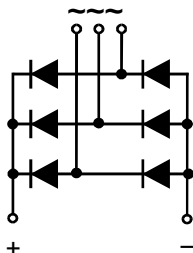


Feature

- International standard package
- Low forward voltage drop
- Isolation voltage 2500V~

Application

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



Maximum value

Symbol	Parameter	Rating							Unit
		MDS300-06F	MDS300-08F	MDS300-10F	MDS300-12F	MDS300-14F	MDS300-16F	MDS300-18F	
V_{RRM}	Peak reverse repetitive voltage	600	800	1000	1200	1400	1600	1800	V
V_{RSM}	Peak reverse non-repetitive voltage	700	900	1100	1300	1500	1700	1900	V

Symbol	Parameter	Test condition	Rating	Unit
I_o	Output DC current	Three-phase whole wave rectifying circuit $T_c:100^\circ\text{C}$	300	A
I_{FSM}	Forward surge current	$t=10\text{ms}, 50\text{HZ}, \text{sin}, T_{jm}$	4800	A
I^2t	I^2t value	$V_R = 0.6V_{RRM}, T_{jm}$	115200	A^2S
V_{ISO}	Isolation voltage	AC one min	2500	V
T_j	Operating junction temperature		-40 to +150	$^\circ\text{C}$
T_{jm}	Rated junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-40 to +125	$^\circ\text{C}$
M_d	Mounting torque (copper plate) M6		$5\pm 15\%$	N·m
	Mounting torque (terminal) <small>M6 M8</small>		$5\pm 15\%$ $7\pm 15\%$	N·m
W_t	weight		580	g

Electrical characteristics

Symbol	Parameter	Test condition	Rating	Unit
I_{RRM}	Peak reverse repetitive current	Single-side heat dissipation, $V_R=V_{RRM}$, sine half wave, $T_j=150^\circ\text{C}$	10	mA
V_{FM}	Peak forward voltage	$I_{FM}=400\text{A}, T_j=25^\circ\text{C}$	1.1	V
$R_{th(j-c)}$	Thermal impedance (junction-case)	Single-side heat dissipation, sine half wave	0.16	$^\circ\text{C/W}$

Performance Curves

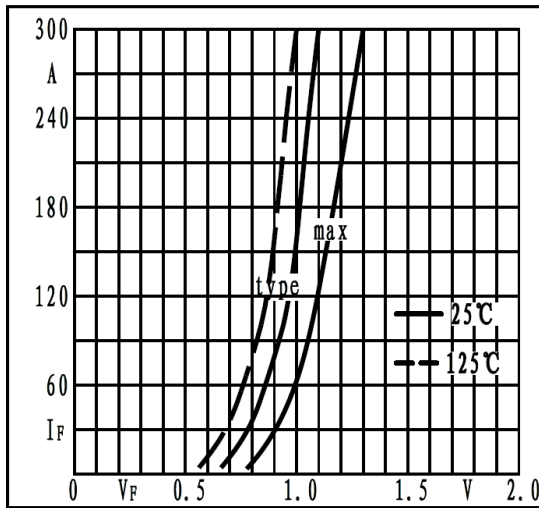


Fig1. Forward characteristics

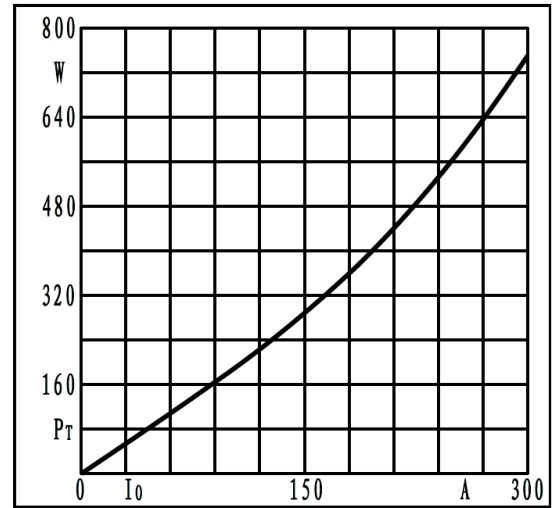


Fig2. Power dissipation

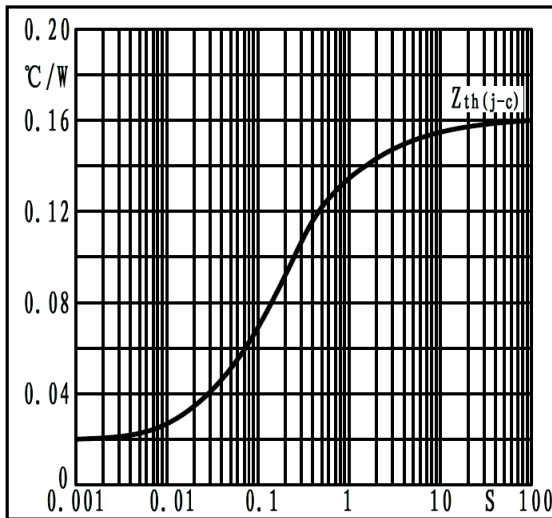


Fig3. Transient thermal impedance

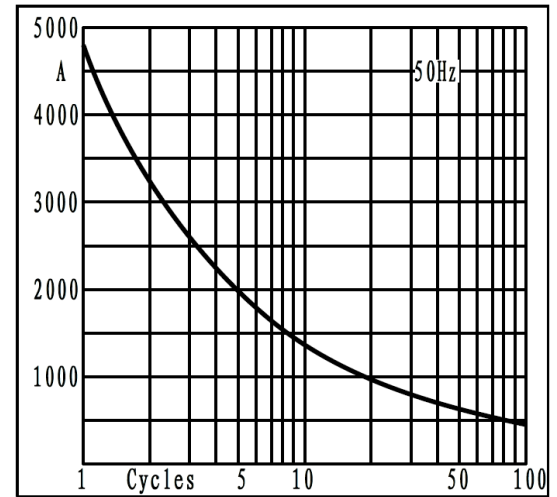


Fig4. Max non-repetitive forward surge current

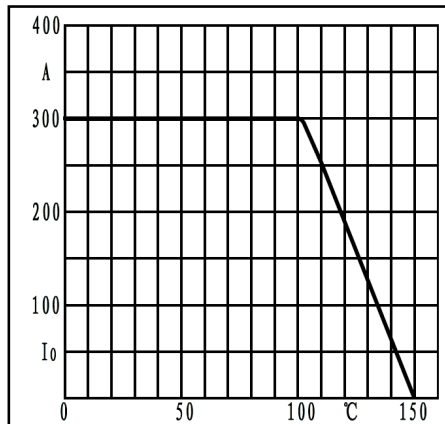


Fig5. Forward current derating curve

Dimension

