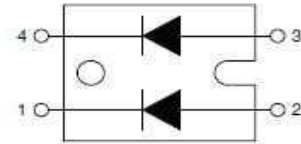


MDF280.06

INSULATED FAST RECOVERY DIODE MODULE

Output Current **280 A**

Blocking Voltage **600 V**



Features

- Ultrafast recovery time
- Low forward voltage
- High surge current capability
- Low leakage current
- Pb-free finished; **RoHS compliant**

Applications

- Switch mode power supplies (SMPS) rectifiers
- Uninterruptible power supplies (UPS)
- Inductive heating and melting
- Ultrasonic cleaners and welders
- Power factor correction (PFC) circuits
- Inversion welder
- Converter and chopper

Characteristics		Conditions	Value	
V_{RRM}	Max repetitive peak reverse voltage	$T_J = 25\text{ }^\circ\text{C}$	600 V	
$I_{F(AV)}$	Average forward current	$T_C = 70\text{ }^\circ\text{C}$	280 A	
I_r	Reverse current, drain current	$T_J = 25\text{ }^\circ\text{C}$	0,25 mA	
		$T_J = 150\text{ }^\circ\text{C}$	2,5 mA	
V_F	Forward drop voltage	$T_J = 25\text{ }^\circ\text{C} @ 100\text{A}$	1,28 V	
		$T_J = 150\text{ }^\circ\text{C} @ 100\text{A}$	1,02 V	
I_{FSM}	Surge forward current	Half sine wave, 10 ms	1400 A	
t_{rr}	Reverse recovery time, typ	1A $V_R=30\text{V}$ df/dt 200A/s	$T_C = 25\text{ }^\circ\text{C}$	60 ns
			$T_C = 100\text{ }^\circ\text{C}$	165 ns
Q_r	Reverse recovery charge	$T_C = 25\text{ }^\circ\text{C}$	510 ns	
		$T_C = 150\text{ }^\circ\text{C}$	1990 ns	
I_{rm}	Max reverse recovery current	$T_C = 25\text{ }^\circ\text{C}$	11 A	
		$T_C = 100\text{ }^\circ\text{C}$	28 A	
$R_{th(j-c)}$	Thermal resistance (junction to case)	Mounting surface flat, smooth and greased	0,650 $^\circ\text{C/W}$	
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Mounting surface flat, smooth and greased	0,100 $^\circ\text{C/W}$	
T_{jmax}	Operating junction temperature		-40 / 175 $^\circ\text{C}$	
T_{op}	Operating temperature		-40 / 175 $^\circ\text{C}$	
T_{stg}	Max storage temperature		-40 / 175 $^\circ\text{C}$	
V_{INS}	RMS Insulating voltage	50 / 60 Hz $t = 60\text{ s}$ ($i < 1\text{ mA}$)	2500 V	
		50 / 60 Hz $t = 1\text{ s}$ ($i < 1\text{ mA}$)	3000 V	
M_D	Mounting torque	Max	1,5 Nm	
M_T	Terminal torque	Max	1,5 Nm	

