

MDS150.17F

Ultrafast Diode module



Features:

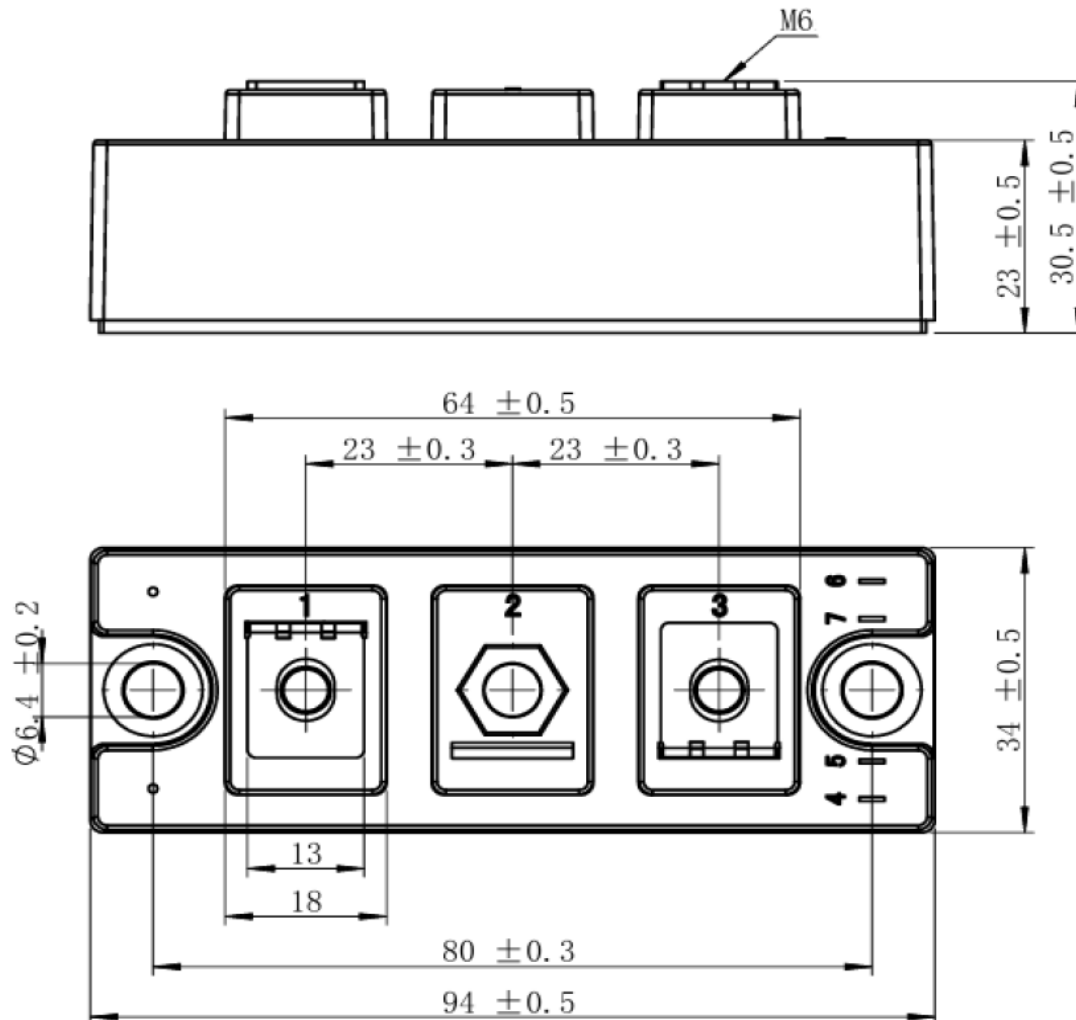
- Ultrafast reverse recovery time
- Soft reverse recovery characteristics
- Low reverse recovery loss
- Low forward voltage
- High surge current capability
- Low inductance package

Typical applications:

- Inversion welder
- Uninterruptible power Supply (UPS)
- Plating power supply
- Ultrasonic cleaner and welder
- Converter and chopper
- PFC



Symbol	Characteristics	Test Conditions	Value			Unit
			Min	Typ	Max	
V_R	Maximum DC reverse voltage	$T_j = 25^\circ\text{C}$			1700	V
V_{RMS}	Maximum repetitive reverse voltage	$T_j = 25^\circ\text{C}$			1700	V
$I_{F(AV)}$	Forward average current	$T_c = 80^\circ\text{C}$, per diode			150	A
$I_{F(RMS)}$	Forward square root current	$T_c = 80^\circ\text{C}$, per diode			200	A
I_R	Reverse leakage current	$V_R = 1700\text{V}$, $T_a = 25^\circ\text{C}$			5	μA
I_{FSM}	Forward surge current	10ms half sine wave, $T_j = 25^\circ\text{C}$			1200	A
I^2t	I^2t for fusing coordination	10ms half sine wave, $T_j = 25^\circ\text{C}$			20000	A^2s
P_D	Power dissipation				532	W
V_{FM}	Peak forward voltage	$T_a = 25^\circ\text{C}$; $I_F = 150\text{A}$	1.40	2.0		V
		$T_a = 125^\circ\text{C}$; $I_F = 150\text{A}$	1.20	1.8		V
T_{rr}	Reverse recovery time	$I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$	190	210	280	ns
$R_{th(j-c)}$	Thermal resistance junction to case	Single side cooled per chip			0.20	$^\circ\text{C/W}$
$R_{th(c-s)}$	Thermal resistance case to sink	Single side cooled per chip			0.10	$^\circ\text{C/W}$
V_{ISO}	Isolation voltage	50Hz, RMS, $t = 1\text{min}$			3000	V
F_M	Mounting torque - copper plate (M6)		4		6	N·m
	Mounting torque - terminal (M6)		4		6	N·m
T_{stg}	Storage Temperature		-40		+125	$^\circ\text{C}$
T_j	Operating Temperature		-40		+150	$^\circ\text{C}$
W_t	Weight			170		g
Outline	M42A					



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(dimensions in mm)

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