

### FEATURES

- Package with screw terminals
- Planar passivated chips
- Low forward voltage drop
- Isolation voltage 2500V ~
- Blocking voltage up to 1800V
- High surge currents

### TYPICAL APPLICATIONS

- Supplies for DC power equipment
- Battery DC power supplies
- Input rectifiers for PWM inverter
- Field supply for DC motors

### PRELIMINARY DATA SHEET

$V_{RSM}$	$I_{DAV}(T_{case}= 100\text{ }^{\circ}\text{C},)$		
	50A	75A	100A
400V	MDS50A400V	MDS75A400V	MDS100A400V
600V	MDS50A600V	MDS75A600V	MDS100A600V
800V	MDS50A800V	MDS75A800V	MDS100A800V
1200V	MDS50A1200V	MDS75A1200V	MDS100A1200V
1400V	MDS50A1400V	MDS75A1400V	MDS100A1400V
1600V	MDS50A1600V	MDS75A1600V	MDS100A1600V
1800V	MDS50A1800V	MDS75A1800V	MDS100A1800V

### ORDERING KEY



CaseA



CaseB

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### ELECTRICAL SPECIFICATIONS

Symbol	Specifications Limits			Units	Conditions
$I_{DAVM}$	50	75	100	A	$T_C=100^{\circ}C$ , module
$I_{FSM}$	550	750	1200	A	$T_{VJ}=45^{\circ}C$ $t=10ms(50\text{ Hz})$ sin.
	600	820	1300	A	$V_R=0$ $t=8.3\text{ ms}$ (60 Hz) sin.
	500	670	1000	A	$T_{VJ}=T_{VJM}$ $t=10\text{ ms}$ (50 Hz) sin.
	550	740	1100	A	$V_R=0$ $t=8.3\text{ ms}$ (60 Hz) sin.
$I^2t$	1520	2800	7200	$A^2s$	$T_{VJ}=45^{\circ}C$ $t=10\text{ ms}$ (50 Hz) sin.
	1520	2800	7200	$A^2s$	$V_R=0$ $t=8.3\text{ ms}$ (60 Hz) sin.
	1250	2250	5000	$A^2s$	$T_{VJ}=T_{VJM}$ $t=10\text{ ms}$ (50 Hz) sin.
	1250	2250	5000	$A^2s$	$V_R=0$ $t=8.3\text{ ms}$ (60 Hz) sin.
Md	$5\pm 15\%$			N.m	mounting torque (M5)
	$5\pm 15\%$			N.m	coupling end torque (M6)
$I_R$	$\leq 0.3$			mA	$V_R=V_{RRM}$ $T_{VJ}=25^{\circ}C$ ,
	$\leq 5$			mA	$V_R=V_{RRM}$ $T_{VJ}=T_{VJM}$
$V_F$	$\leq 1.80$	$\leq 1.60$	$\leq 1.25$	V	$I_F=100A$ $T_{VJ}=25^{\circ}C$ ,
				V	$I_F=150A$ $T_{VJ}=25^{\circ}C$ ,
			$\leq 1.9$	V	$I_F=300A$ $T_{VJ}=25^{\circ}C$ ,
$V_{TO}$	0.8	0.8	0.8	V	For power-loss calculations only
$r_T$	8	5	5	m $\Omega$	$T_{VJ}=T_{VJM}$
$V_{ISOL}$	2500			V	50/60Hz RMS $t=1\text{ min}$
	3000			V	$I_{ISOL}$ 1mA $t=1\text{ s}$
$T_{VJ}$	-40 to 150			$^{\circ}C$	
$T_{VJM}$	150			$^{\circ}C$	
Tstg	-40 to 150			$^{\circ}C$	
$R_{thJC}$	1.45	1	1.1	K/W	per diode, DC
	0.24	0.2	0.183	K/W	module
$R_{thJK}$	1.87	1.52	1.52	K/W	per diode, DC
	0.31	0.27	0.253	K/W	module
$d_s$	10			mm	Exterior creepage distance
$d_A$	9.40			mm	Creepage distance in the air
a	50			m/S <sup>2</sup>	Maximal acceleration
Wt	169			g	Case A (Typical)
	160			g	Case B (Typical)

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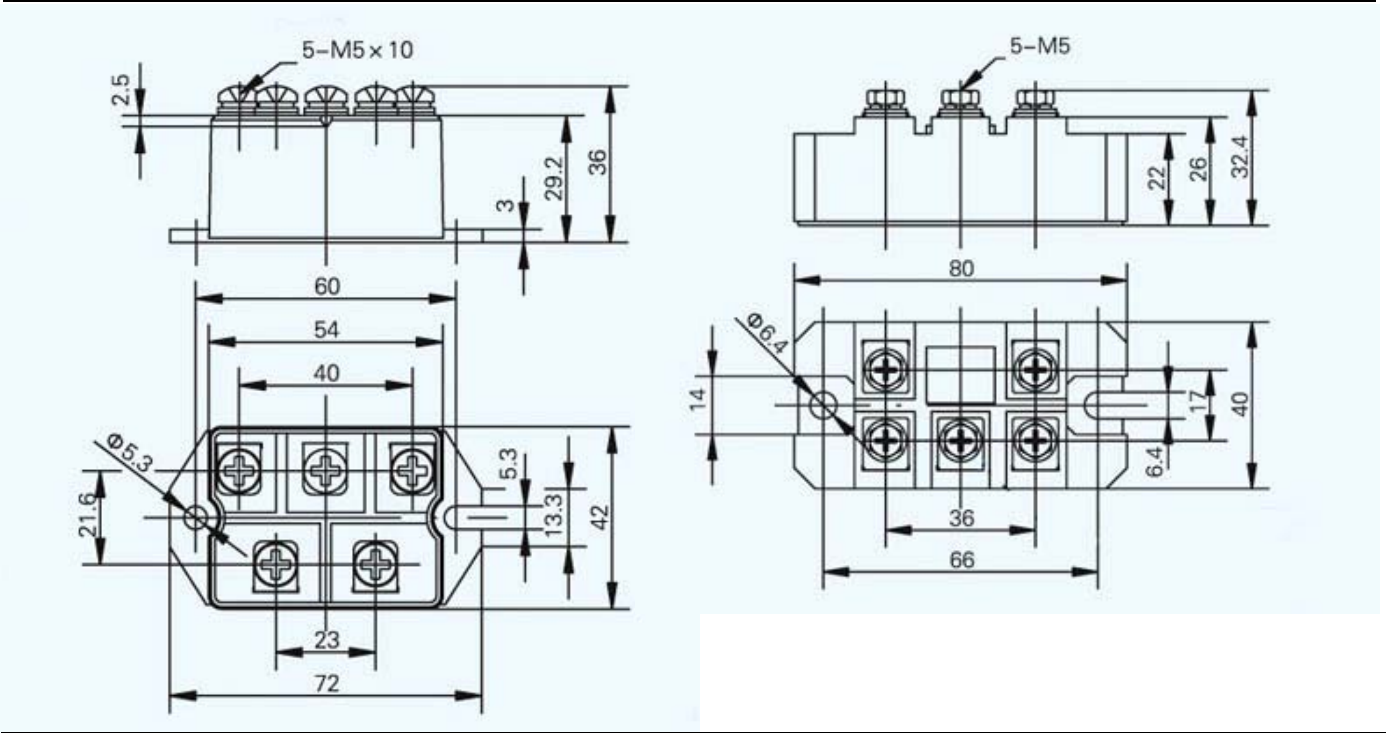
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	190	g	Case C (Typical)
Colour	Black		
LxWxH	72x42x29	mm	
	80x40x26	mm	



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## FEATURES

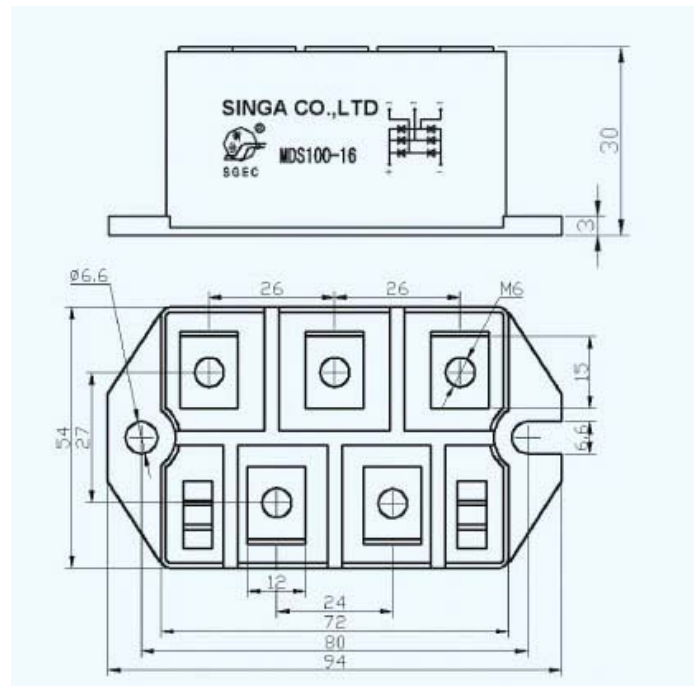
- Package with screw terminals
- Isolation voltage 2500V
- Planar passivated chips
- Blocking voltage up to 1800V
- Low forward voltage drop

## TYPICAL APPLICATIONS

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

## ADVANTAGES

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling



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### ELECTRICAL SPECIFICATIONS

Symbol	Specifications Limits		Units	Conditions
$I_{DAVM}$	160	200	A	$T_C=100^{\circ}C$ , module
$I_{FSM}$	1500	1800	A	$T_{VJ}=45^{\circ}C$ $t=10$ ms (50 Hz) sin.
	1650	1950	A	$V_R=0$ $t=8.3$ ms (60 Hz) sin.
	1350	1600	A	$T_{VJ}=T_{VJM}$ $t=10$ ms (50 Hz) sin.
	1500	1800	A	$V_R=0$ $t=8.3$ ms (60 Hz) sin.
$I^2t$	11250	16200	$A^2s$	$T_{VJ}=45^{\circ}C$ $t=10$ ms (50 Hz) sin.
	11300	16000	$A^2s$	$V_R=0$ $t=8.3$ ms (60 Hz) sin.
	9120	12800	$A^2s$	$T_{VJ}=T_{VJM}$ $t=10$ ms (50 Hz) sin.
	9350	13600	$A^2s$	$V_R=0$ $t=8.3$ ms (60 Hz) sin.
Md	$5\pm 15\%$		N.m	mounting torque (M5)
	$5\pm 15\%$		N.m	coupling end torque (M6)
$I_R$	$\leq 1$	$\leq 1$	mA	$V_R=V_{RRM}$ $T_{VJ}=25^{\circ}C$
	$\leq 5$	$\leq 8$	mA	$V_R=V_{RRM}$ $T_{VJ}=T_{VJM}$
$V_F$	$\leq 1.60$	$\leq 1.30$	V	$I_F=150A$ $T_{VJ}=25^{\circ}C$
$V_{TO}$	0.8	0.8	V	For power-loss calculations only
$r_T$	5	3	$m\Omega$	$T_{VJ}=T_{VJM}$
$V_{ISOL}$	2500		V	50/60Hz RMS $t=1$ min
$T_{VJ}/T_{stg}$	-40 to 150		$^{\circ}C$	
$R_{thJC}$	0.83	0.63	K/W	per diode DC
	0.138	0.11	K/W	module
$R_{thJK}$	1.13	0.93	K/W	per diode DC
	0.188	0.16	K/W	module
$d_s$	10		mm	Exterior creepage distance
$d_A$	9.40		mm	Creepage distance in the air
a	50		$m/S^2$	Maximal acceleration
Wt	460		g	Typical
Colour	Black			
LxWxH	94x54x30		mm	

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