



CMDS SERIES

Power Modules

Features

- High Thermal Efficiency
- Complete Power Control Circuits in a Single Package

DESCRIPTION

These modules provide complete power control in a single package, utilizing high thermal efficiency to assure long life and reliable performance. Six standard models provide 2500 Vrms isolation from all terminals to ceramic base and are UL recognition pending.

PART NUMBER IDENTIFICATION

EX.: CMDS250/16

Series Type	Current	Circuit Type	Voltage
CMDS-Case style	62 - 60 Amps	(see schematic diagram)	06 - 600
	82 - 80 Amps		08 - 800
	160 - 180 Amps	Three Phase Bridge	10 - 1000
	210 - 200 Amps		12 - 1200
	250 - 250 Amps		14 - 1400
			16 - 1600

ELECTRICAL SPECIFICATION

160

210

250

SYMBOL	SPECIFICATION	RATINGS		
I_D	Maximum DC Output Current ($T_c = 85^\circ\text{C}$)	180 Amps	200 Amps	250 Amps
V_F	Maximum Voltage Drop @ Amps Peak	1.65V @ $I_F=300\text{A}$	1.43V @ $I_F=300\text{A}$	1.43V @ $I_F=300\text{A}$
T_J	Operating Junction Temperature Range	-40°C to +125°C		
di/dt	Critical Rate of Rise of On-State Current @ $T_J=125^\circ\text{C}$	100A/ μs	100A/ μs	100A/ μs
dv/dt	Critical Rate of Rise of Off-State Voltage [V/ μs]	1000V/ μs	1000V/ μs	1000V/ μs
V_{RRM}	Repetitive Peak Reverse Voltage (AC Line)	400 (120 Vac) 600 (240 Vac) 1000 (380 Vac) 1200 (480 Vac) 1400 (530 Vac) 1600 (600 Vac)		
I_{TSM}	Maximum Non-Repetitive Surge Current ($1/2$ Cycle, 60Hz)	1800A	2200A	2750A
I^2T	Maximum I^2T for Fusing ($t=8.3\text{ms}$) [$\text{A}^2 \text{sec}$]	16200	36000	45000
R_{qJC}	Maximum Thermal Resistance Junction to Ceramic Base per Chip	0.65°K/W	0.45°K/W	0.45°K/W
V_{ISOL}	Isolation Voltage	2500 V _{RMS}	2500 V _{RMS}	2500 V _{RMS}

MECHANICAL SPECIFICATIONS

Weight: (typical)

9.5 oz. (270g)

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For recommended applications and more information contact:

USA: Sales Support (888) 882-8689

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EX.: CMDS250/16

Series Type	Current	Circuit Type	Voltage
CSD-Case style	62 - 60 Amps	(see schematic diagram)	06 - 600
	82 - 80 Amps	Three Phase Bridge	08 - 800
	160 - 180 Amps		10 - 1000
	210 - 200 Amps		12 - 1200
	250 - 250 Amps		14 - 1400
			16 - 1600

ELECTRICAL SPECIFICATION

62

82

SYMBOL	SPECIFICATION	RATINGS	
I_D	Maximum DC Output Current ($T_c = 85^\circ\text{C}$)	60 Amps	80 Amps
V_F	Maximum Voltage Drop @ Amps Peak	1.8V @ $I_F=150$	1.6V @ $I_F=150A$
T_J	Operating Junction Temperature Range	-40°C to +125°C	
di/dt	Critical Rate of Rise of On-State Current @ $T_J=125^\circ\text{C}$	100A/ μs	100A/ μs
dv/dt	Critical Rate of Rise of Off-State Voltage [V/ μs]	1000V/ μs	1000V/ μs
V_{RRM}	Repetitive Peak Reverse Voltage (AC Line)	400 (120 Vac) 600 (240 Vac) 1000 (380 Vac) 1200 (480 Vac) 1400 (530 Vac) 1600 (600 Vac)	
I_{TSM}	Maximum Non-Repetitive Surge Current ($1/2$ Cycle, 60Hz)	550 A	740 A
I^2T	Maximum I^2T for Fusing ($t=8.3\text{ms}$) [$A^2 \text{ sec}$]	1520	2800
R_{qJC}	Maximum Thermal Resistance Junction to Ceramic Base per Chip	1.45°K/W	1.1°K/W
V_{ISOL}	Isolation Voltage	2500 V _{RMS}	2500 V _{RMS}

MECHANICAL SPECIFICATIONS

Weight: (typical)

5.64 oz. (160g)

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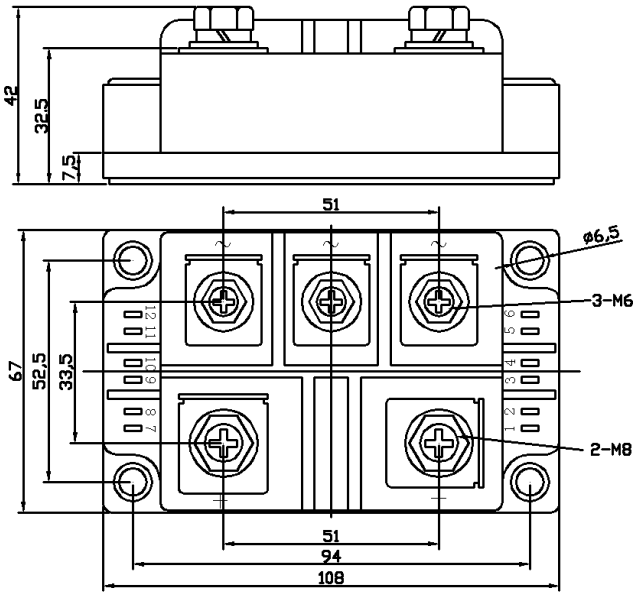
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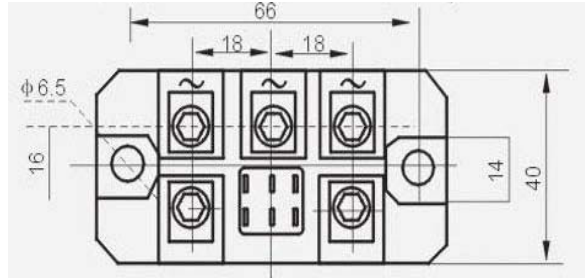
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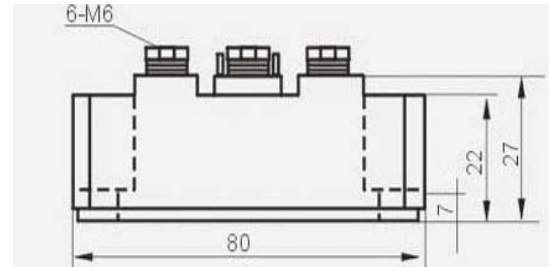
MECHANICAL DIMENSIONS AND CIRCUIT DIAGRAM



Package Dimensions for 150-250 Amp Models

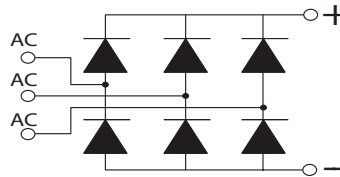


Package Dimensions SIDE 25 and 50 Amp Models



Package Dimensions for 25 and 100 Amp Models

SERIES CMDS CIRCUIT 3 PHASE



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