

150V / 200A

2-PACK MOSFET MODULE (Common-Drain)

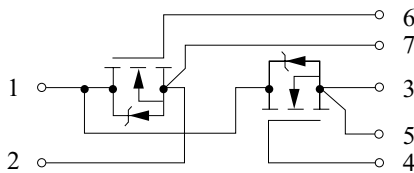
FEATURES

- Low $R_{DS(on)}$
- High frequency operation
- dv/dt ruggedness
- Fast switching

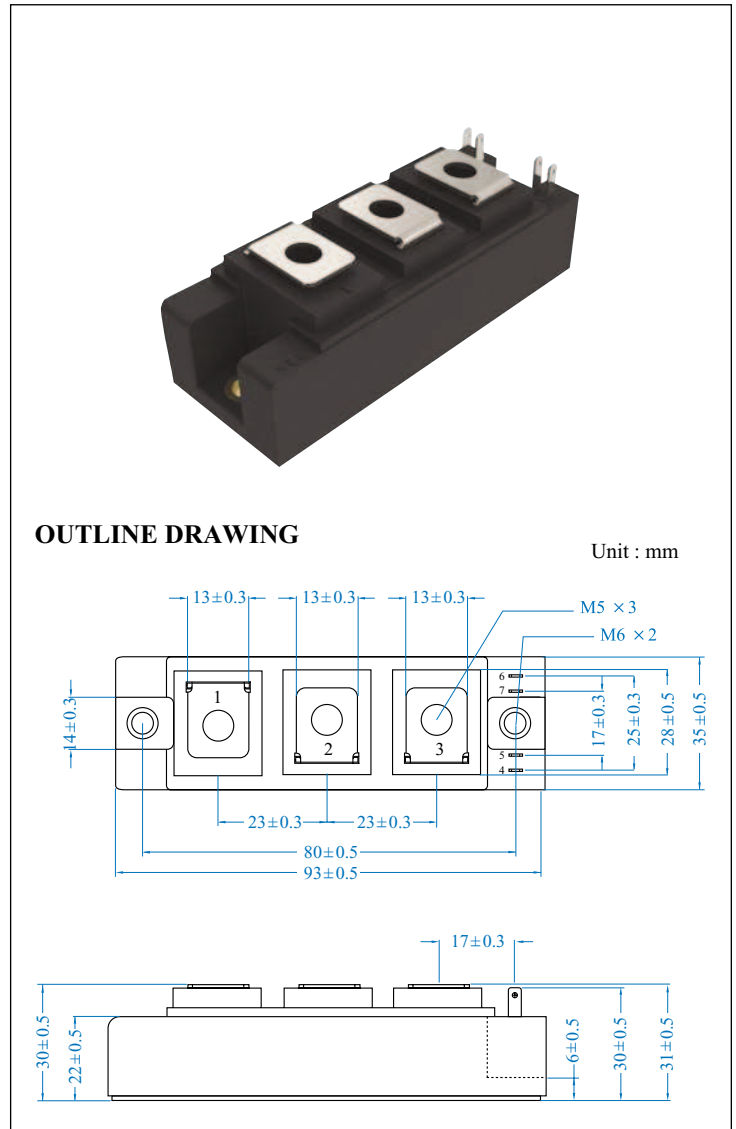
APPLICATION

- Battery Management System
- Electric Vehicle

INTERNAL CIRCUIT



- | | |
|---------|-------|
| 1. D1D2 | 4. G1 |
| 2. S2 | 5. S1 |
| 3. S1 | 6. G2 |
| | 7. S2 |



MAXIMUM RATING (@Tc=25°C Per Leg, Unless otherwise noted)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-to-Source Breakdown Voltage		V_{DSS}	150	V
Gate to Source Voltage		V_{GSS}	± 30	V
Continuous Drain Current	@T _C =25°C	I_D	340	A
	@T _C =100°C		240	
Pulsed Drain Current		I_{DM}	1300	A
Isolation Voltage Test		V_{ISO}	2500	V
Junction Temperature		T_j	-40 ~ +150	°C
Storage Temperature		T_{stg}	-40 ~ +125	°C
Weight		Weight	365 ± 5	g
Mounting Torque (M6)		M	5	N · m
Terminal Connection Torque (M5)		M	4	N · m

FM200CD1D5B

ELECTRICAL CHARACTERISTICS (@Tc=25°C Per Leg, Unless otherwise noted)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Static						
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu A, V_{GS}=0V$	150	-	-	V
Gate Threshold Voltage	V_{th}	$V_{DS}=V_{GS}, I_D=250\mu A$	3.0	-	5.0	V
Drain to Source Leakage Current	I_{DSS}	$V_{DS}=150V, V_{GS}=0V$	-	-	40	μA
Gate to Source Leakage Current	I_{GSS}	$V_{GS}=20V$	-	-	200	nA
		$V_{GS}=-20V$	-	-	-200	nA
Drain to Source ON Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=200A$	-	3.3	4.0	$m\Omega$
Dynamic						
Total Gate Charge	Q_g	$I_D=200A, V_{DS}=75V, V_{GS}=10V$	-	300	-	nC
Gate to Source Charge	Q_{gs}		-	100	-	
Gate to Source Charge	Q_{gd}		-	110	-	
Turn On Delay Time	$t_{d(on)}$	$V_{DS}=75V, I_D=200A, R_G=3.3\Omega \downarrow$	-	TBD	-	ns
Rise Time	t_r		-	TBD	-	
Turn Off Delay Time	$t_{d(off)}$		-	TBD	-	
Fall Time	t_f		-	TBD	-	
Input Capacitance	C_{iss}	$V_{DS}=50V, V_{GS}=0V, f=1MHz$	-	20	-	nF
Output Capacitance	C_{oss}		-	2	-	
Reverse Transfer Capacitance	C_{rss}		-	0.4	-	
Source-Drain Diode Ratings						
Continuous Source Current	I_S		-	-	340	A
Pulsed Source Current	I_{SP}		-	-	1300	A
Diode Forward Voltage	V_{SD}	$I_D=200A, V_{GS}=0V$	-	1.0	1.4	V
Reverse Recovery Time	t_{rr}	$V_R=75V, I_D=200A, di/dt = -100A/us$	-	TBD	-	ns
Reverse Recovery Charge	Q_{rr}		-	TBD	-	nC