

150V / 200A

2-PACK MOSFET MODULE (Common-Drain)

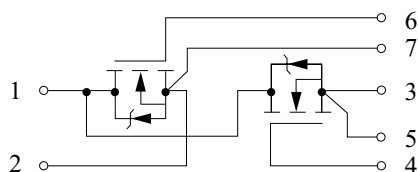
FEATURES

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

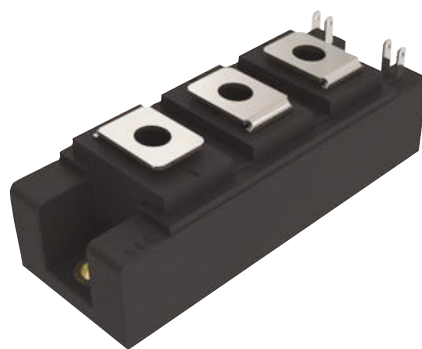
APPLICATION

- Battery Management System
- Electric Vehicle

INTERNAL CIRCUIT

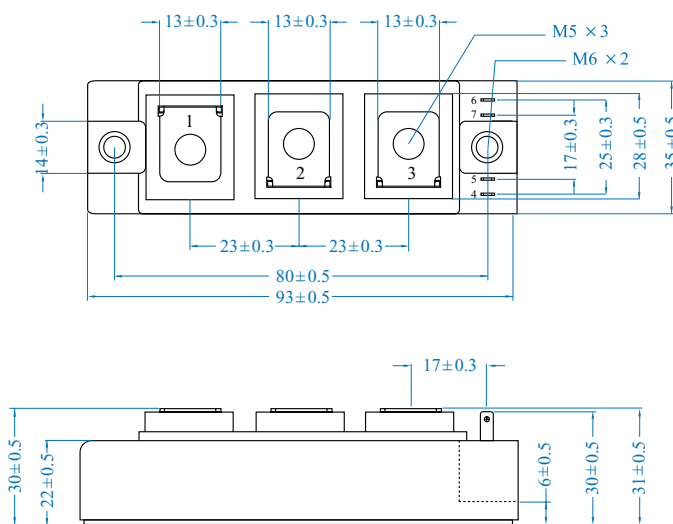


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|---------|-------|
| 1. D1D2 | 4. G1 |
| 2. S2 | 5. S1 |
| 3. S1 | 6. G2 |
| | 7. S2 |



OUTLINE DRAWING

Unit : mm



MAXIMUM RATING (@ $T_c=25$ 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	@ $T_c=25$	I_D	340	A
	@ $T_c=100$		240	
Pulsed Drain Current	@ $T_c=25$, Pulsed	I_{DM}	1300	A
Isolation Voltage Test	AC@1minute	V_{ISO}	2500	V
Junction Temperature		T_j	-40 +150	
Storage Temperature		T_{stg}	-40 +125	
Weight		Weight	365 $\pm$ 5	g
Mounting Torque (M6)		M	5	N · m
Terminal Connection Torque (M5)		M	4	N · m

FM200CD1D5B

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Static						
Drain-Source Breakdown Voltage	BV _{DSS}	I _D =250μA , V _{GS} =0V	150	-	-	V
Gate Threshold Voltage	V _{th}	V _{DS} =V _{GS} , I _D =250μA	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	mΩ
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 =3.3Ω↓	-	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