

# MTM765200LBF

## Dual N-channel MOSFET

For switching

■ **Features**

- Low drain-source ON resistance:  $R_{DS(on)typ} = 80 \text{ m}\Omega$  ( $V_{GS} = 4.0 \text{ V}$ )
- Low drive voltage: 1.8 V drive
- Halogen-free / RoHS compliant  
(EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ **Marking Symbol:** JA

■ **Basic Part Number**

Dual Nch MOS 20 V (Individual)

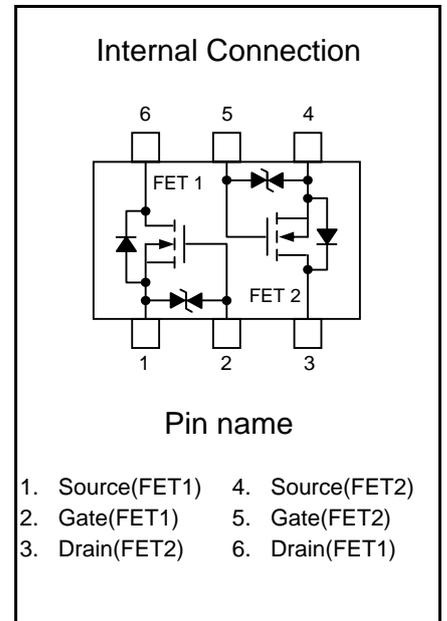
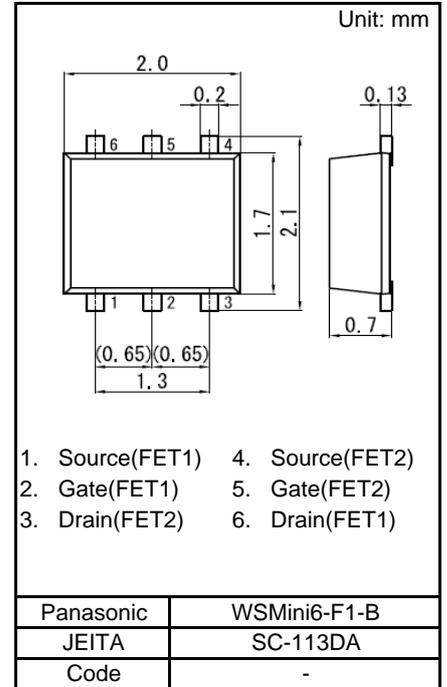
■ **Packaging**

MTM765200LBF Embossed type (Thermo-compression sealing):  
3 000 pcs / reel (standard)

■ **Absolute Maximum Ratings**  $T_a = 25 \text{ }^\circ\text{C}$

Parameter		Symbol	Rating	Unit
FET1	Drain-source Voltage	VDS	20	V
	Gate-source Voltage	VGS	$\pm 10$	V
FET2	Drain Current	ID	2.0	A
	Drain Current (Pulsed) <sup>*1</sup>	IDp	12	A
Overall	Total power dissipation	PD1 <sup>*2</sup>	700	mW
		PD2 <sup>*3</sup>	150	
	Channel temperature	Tch	150	$^\circ\text{C}$
	Storage temperature	Tstg	-55 to +150	$^\circ\text{C}$

- Note: \*1  $t = 10 \text{ }\mu\text{s}$ , Duty Cycle  $\leq 1 \%$   
 \*2 Glass epoxy board (  $25.4 \times 25.4 \times t0.8 \text{ mm}$  ) coated with copper foil, which has more than  $300 \text{ mm}^2$   
 \*3 Non-heat sink



■ Electrical Characteristics Ta = 25 °C ± 3 °C

FET1,2

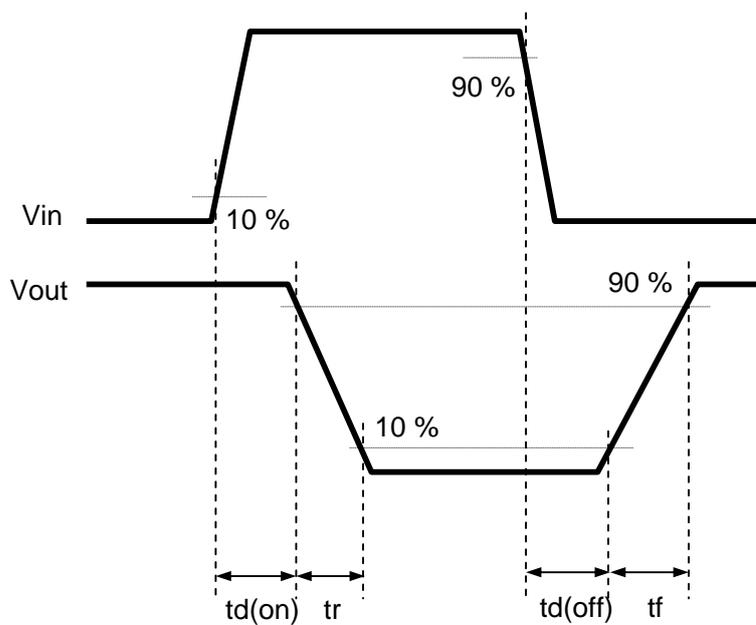
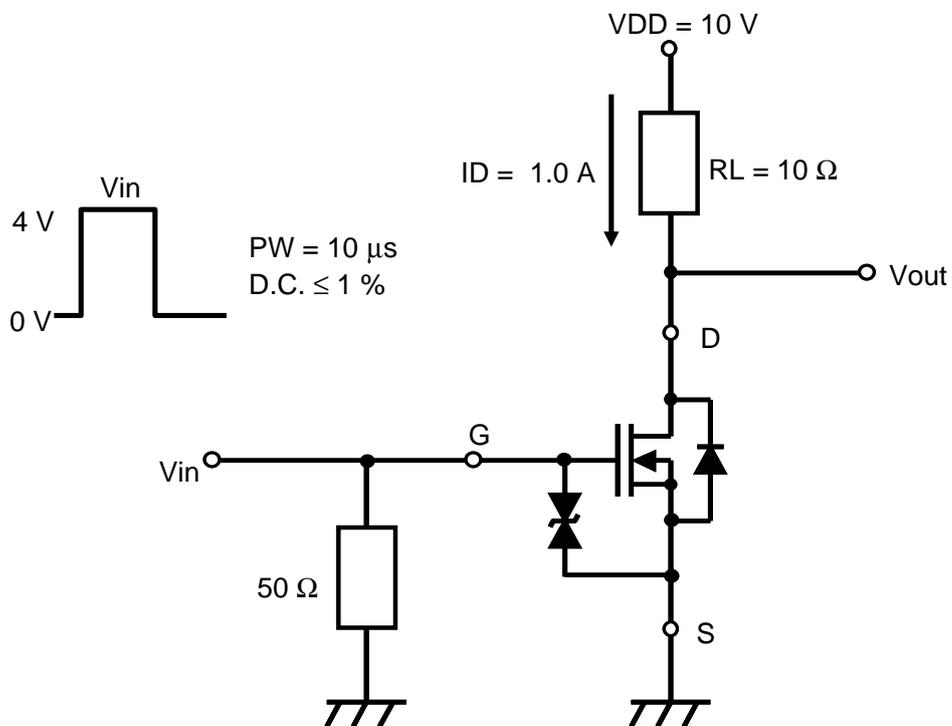
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source Breakdown Voltage	VDSS	ID = 1.0 mA, VGS = 0 V	20			V
Zero Gate Voltage Drain Current	IDSS	VDS = 20 V, VGS = 0 V			1.0	μA
Gate-source Leakage Current	IGSS	VGS = ± 8.0 V, VDS = 0 V			±10	μA
Gate-source Threshold Voltage	Vth	ID = 1.0 mA, VDS = 10 V	0.4	0.85	1.3	V
Drain-source On-state Resistance *1	RDS(on)1	ID = 1.0 A, VGS = 4.0 V		80	105	mΩ
	RDS(on)2	ID = 0.5 A, VGS = 2.5 V		100	150	
	RDS(on)3	ID = 0.5 A, VGS = 1.8 V		170	300	
Forward Transfer Admittance *1	Yfs	ID = 1.0 A, VDS = 10 V	2.4	4.0		S
Input Capacitance	Ciss	VDS = 10 V, VGS = 0 V, f = 1 MHz		280		pF
Output Capacitance	Coss			18		
Reverse Transfer Capacitance	Crss			17		
Turn-on delay time *2	td(on)	VDD = 10 V, VGS = 0 to 4 V, ID = 1.0 A		5		ns
Rise time *2	tr			8		
Turn-off delay time *2	td(off)	VDD = 10 V, VGS = 4 to 0 V, ID = 1.0 A		20		
Fall time *2	tf			18		

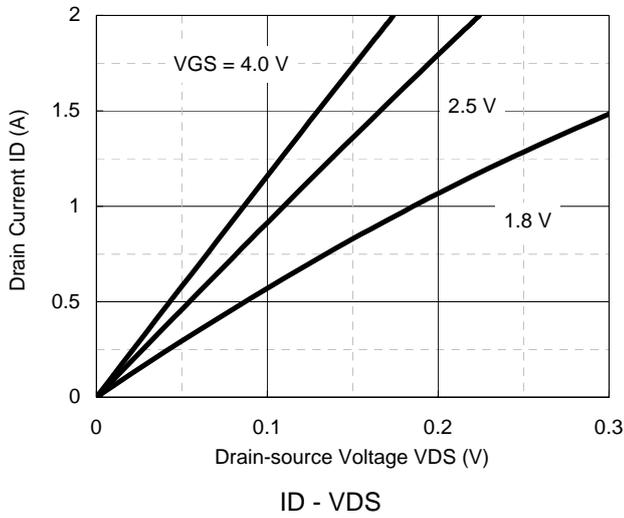
Note: Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

\*1 Pulse measurement.

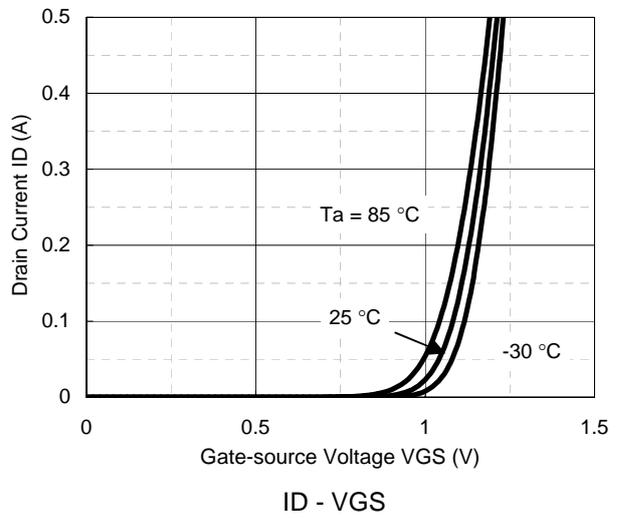
\*2 See Test circuit.

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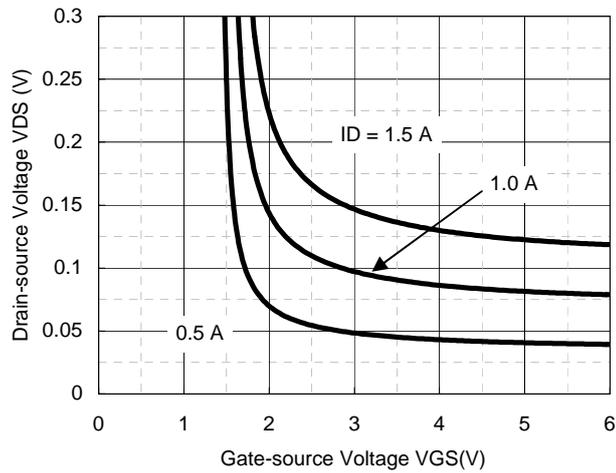




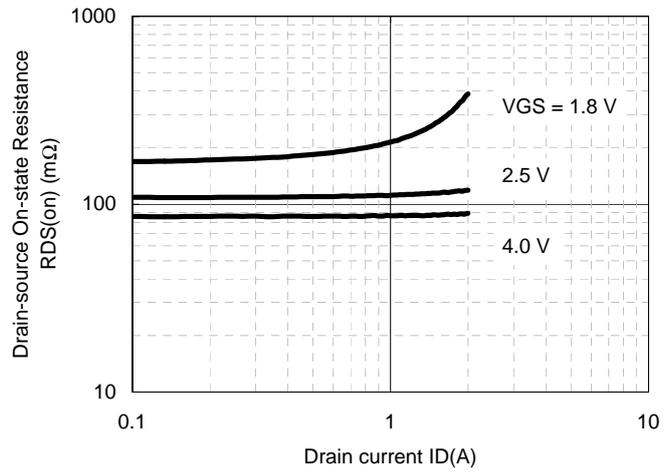
ID - VDS



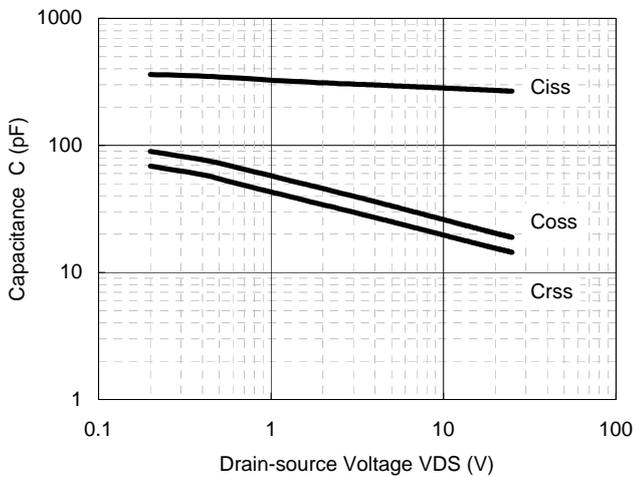
ID - VGS



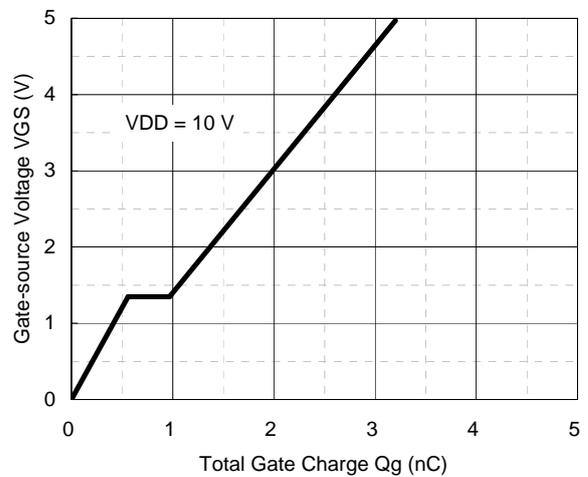
VDS - VGS



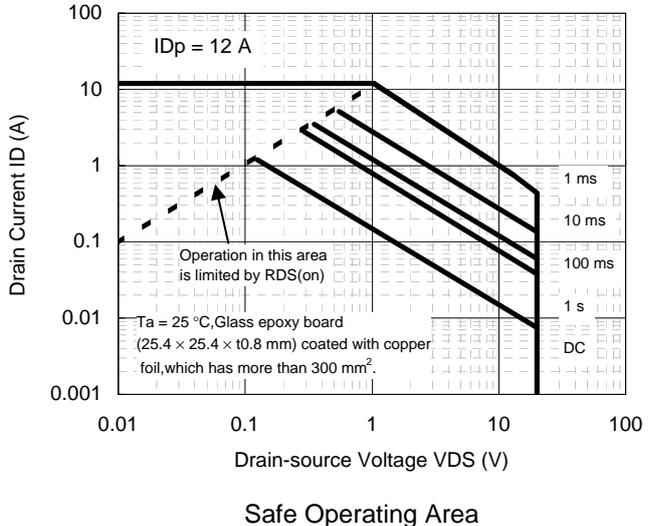
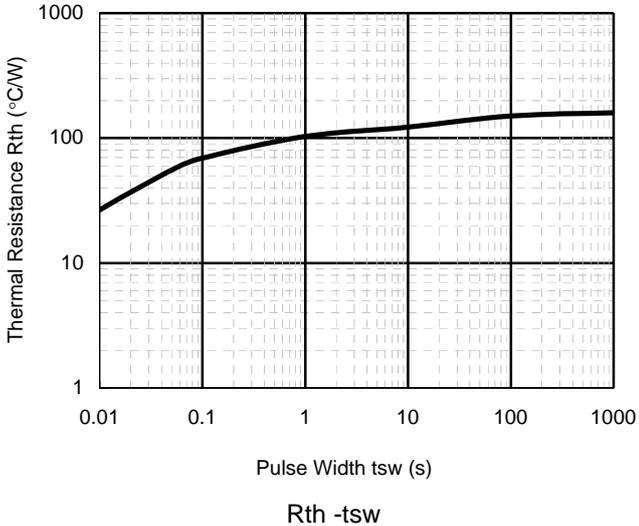
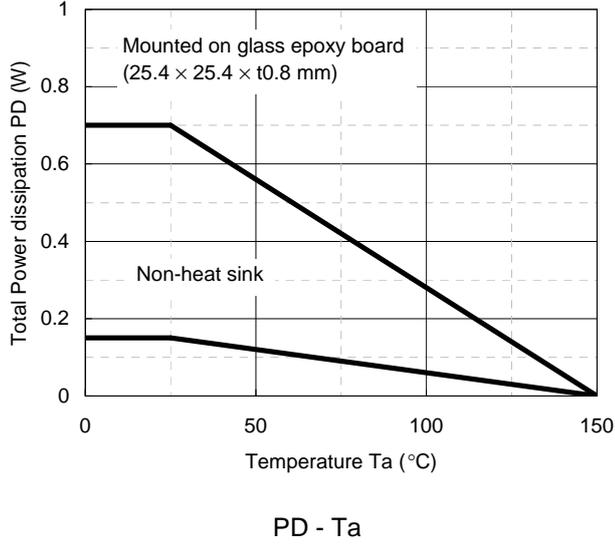
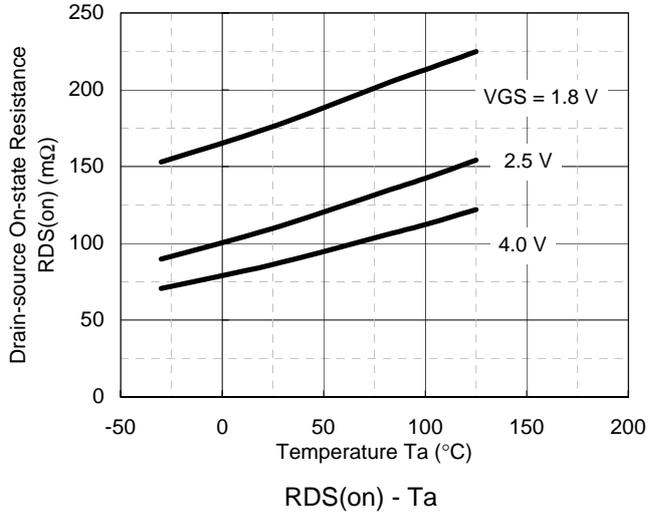
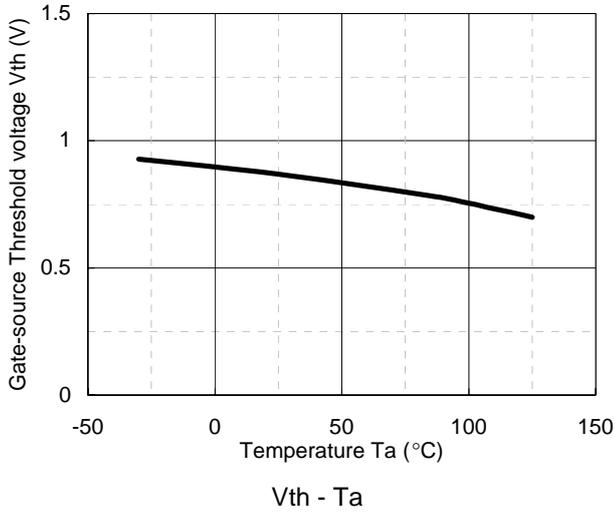
RDS(on) - ID



Capacitance - VDS

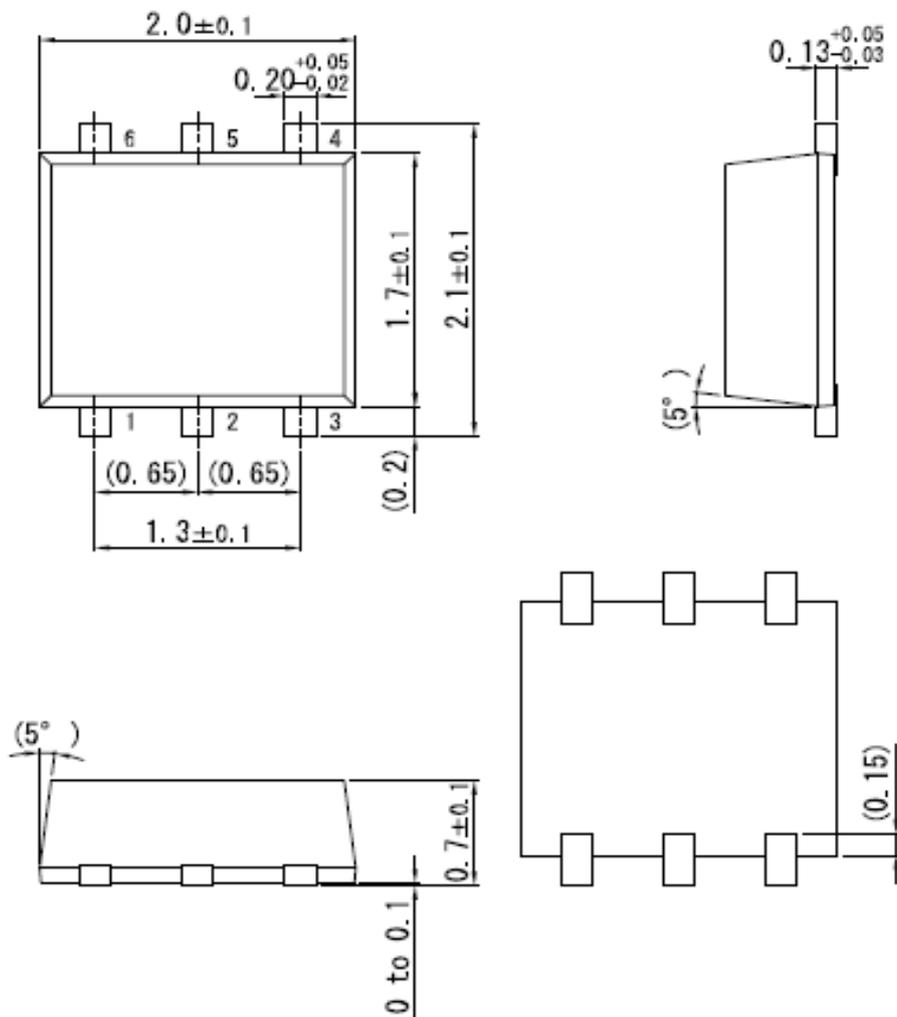


Dynamic Input/Output Characteristics

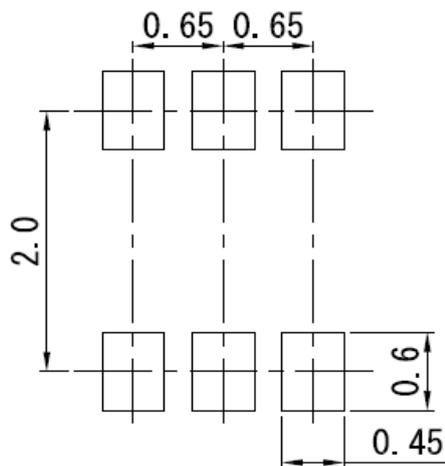


WSMini6-F1-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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