



MTM861270LBF
Silicon P-channel MOSFET

For Switching

MTM13127 in WSSMini6 type package

■ Features

- Low Drain-source On-state Resistance : $R_{DS(on)}$ typ = 80 m Ω (VGS = -4 V)
- Low Drive Voltage : 1.8 V Drive
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL : Level 1 compliant)

■ Marking Symbol : MK

■ Packaging

Embossed type (Thermo-compression sealing) : 10 000 pcs / reel (standard)

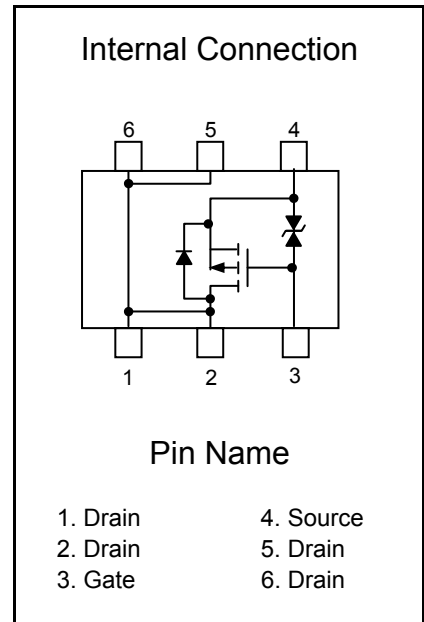
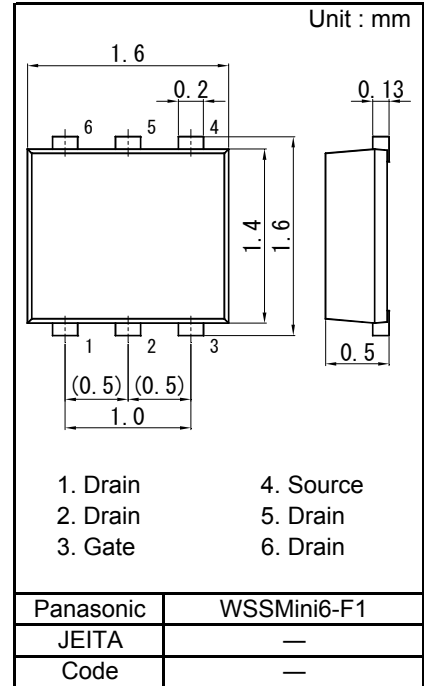
■ Absolute Maximum Ratings Ta = 25 °C

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	VDS	-20	V
Gate to Source Voltage	VGS	± 10	
Drain Current	ID	-2	A
Drain Current (Pulsed) ^{*1}	IDp	-8	
Total Power Dissipation	PD1 ^{*2}	540	mW
	PD2 ^{*3}	150	
Channel Temperature	Tch	150	°C
Storage Temperature Range	Tstg	-55 to +150	

Note *1 $t \leq 10 \mu s$, Duty cycle $\leq 1 \%$

*2 Glass epoxy substrate (25.4 × 25.4 × t 0.8 mm) coated with copper foil (more than 300 mm²)

*3 Non-heat sink



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

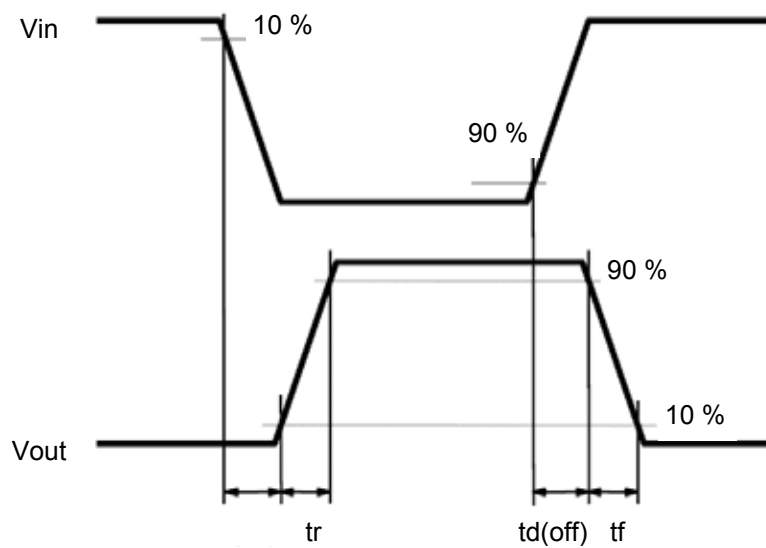
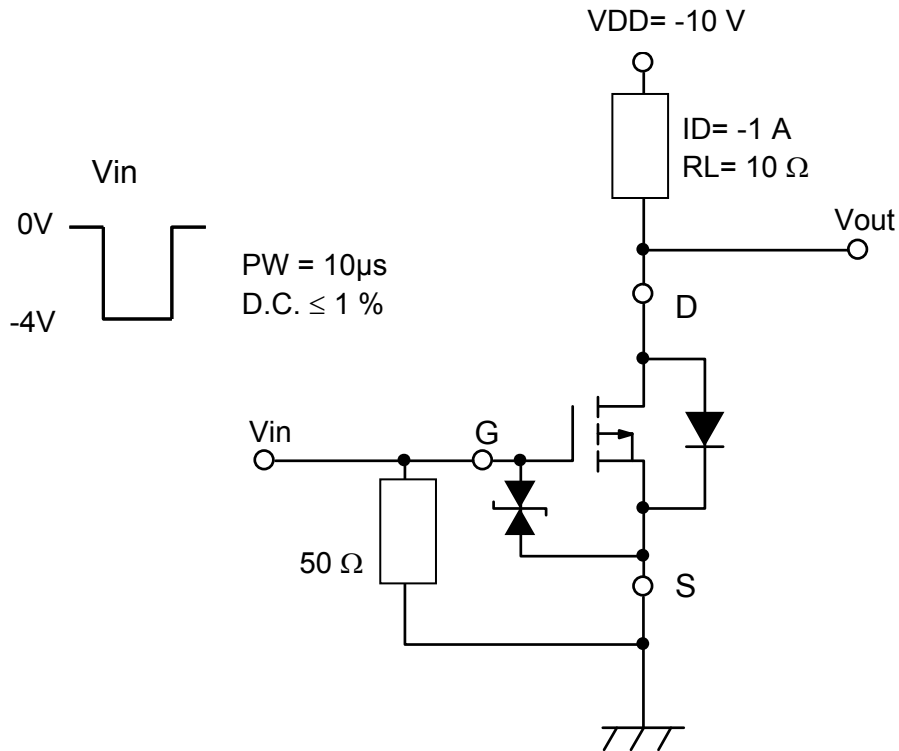
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source Breakdown Voltage	VDSS	ID = -1 mA, VGS = 0 V	-20			V
Zero Gate Voltage Drain Current	IDSS	VDS = -20 V, VGS = 0 V			-1	μA
Gate-source Leakage Current	IGSS	VGS = ±8 V, VDS = 0 V			±10	
Gate-source Threshold Voltage	Vth	ID = -1 mA, VDS = -10 V	-0.4	-0.75	-1.1	V
Drain-source On-state Resistance *1	RDS(on)1	ID = -1 A, VGS = -4 V		80	120	mΩ
	RDS(on)2	ID = -1 A, VGS = -2.5 V		100	170	
	RDS(on)3	ID = -0.5 A, VGS = -1.8 V		140	230	
Forward transfer admittance *1	Yfs	ID = -1 A, VDS = -10 V, f = 1 kHz	3			S
Input Capacitance	Ciss	VDS = -10 V, VGS = 0 V f = 1 MHz		300		pF
Output Capacitance	Coss			30		
Reverse Transfer Capacitance	Crss			35		
Turn-on Delay Time *2	td(on)	VDD = -10 V, VGS = 0 to -4 V		6		ns
Rise Time *2	tr	ID = -1 A		8		
Turn-off Delay Time *2	td(off)	VDD = -10 V, VGS = -4 to 0 V		57		
Fall Time *2	tf	ID = -1 A		55		

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

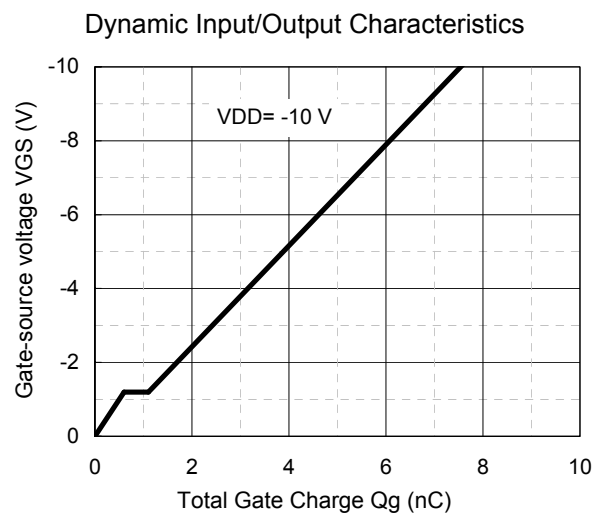
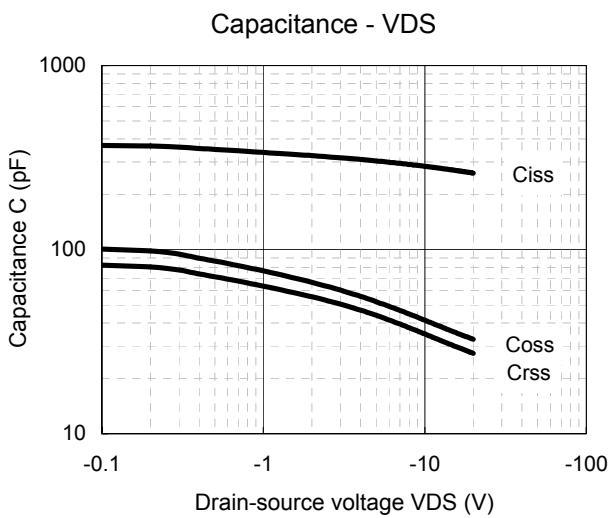
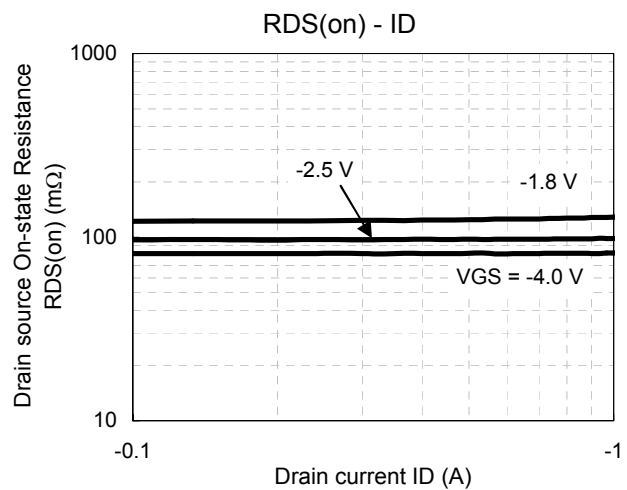
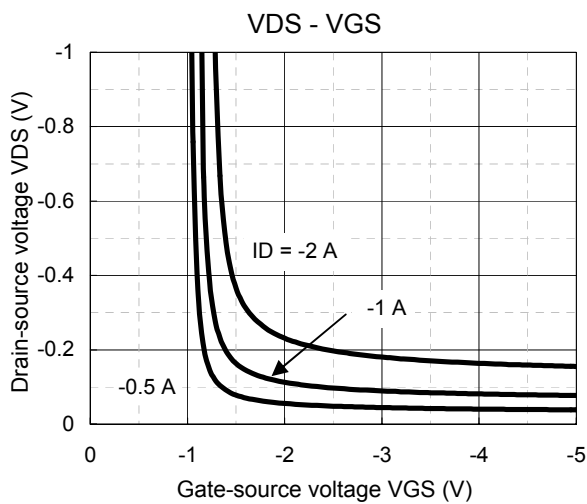
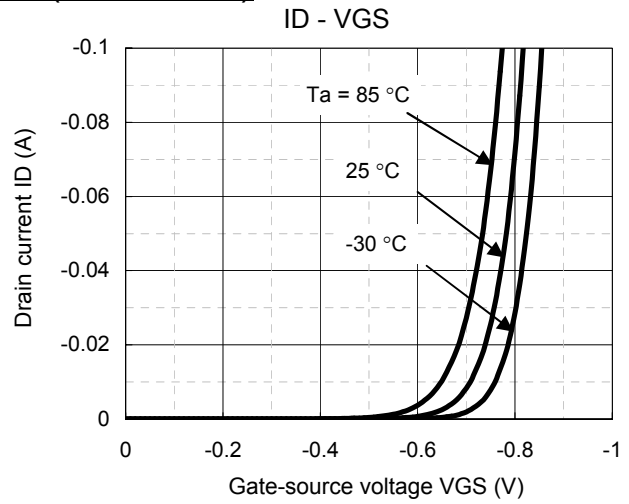
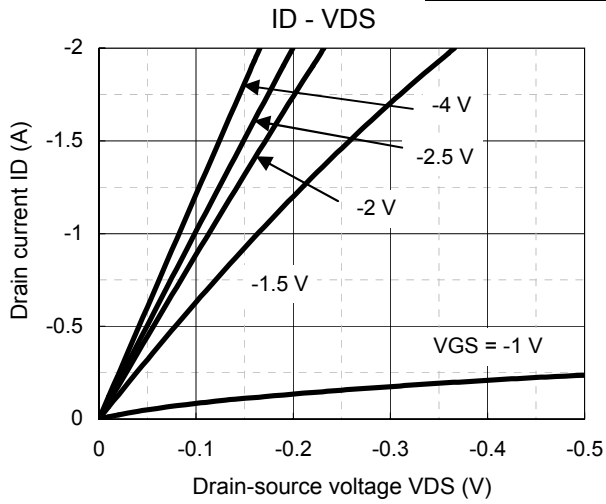
*1 Pulse test

*2 Measurement circuit for Turn-on Delay Time / Rise Time / Turn-off Delay Time / Fall Time

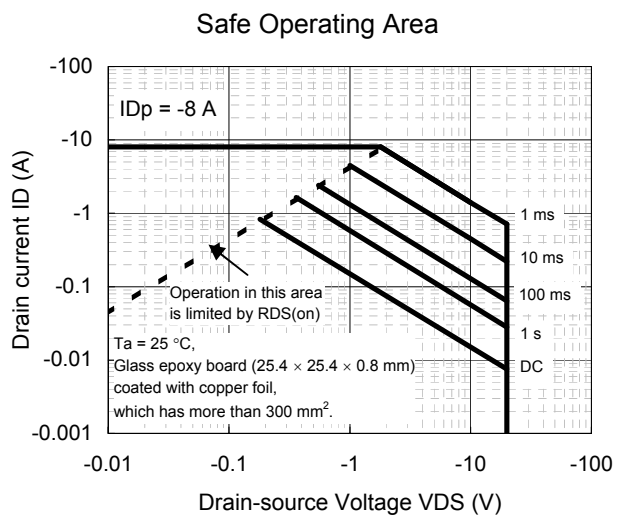
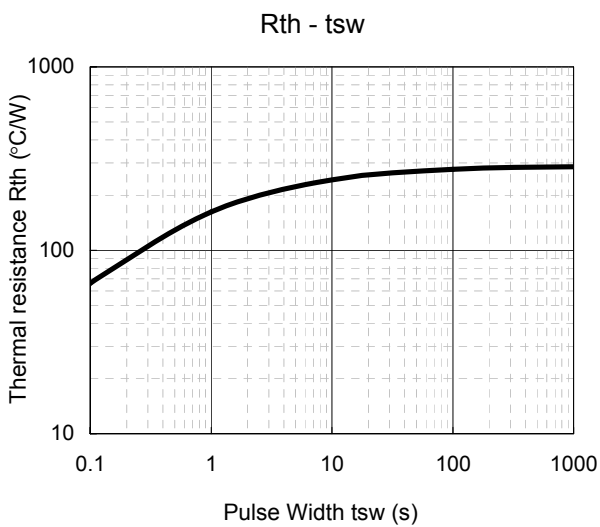
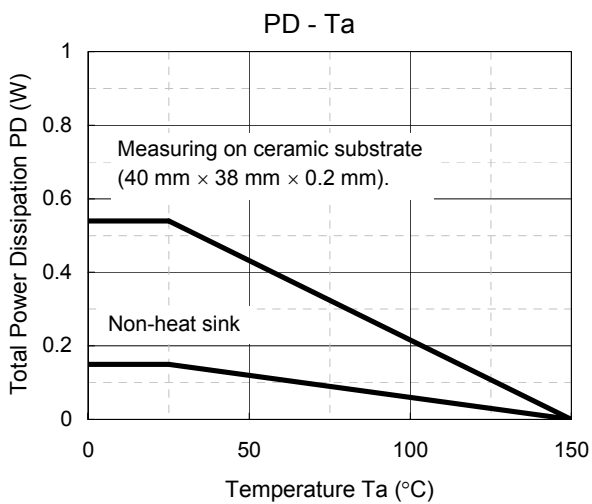
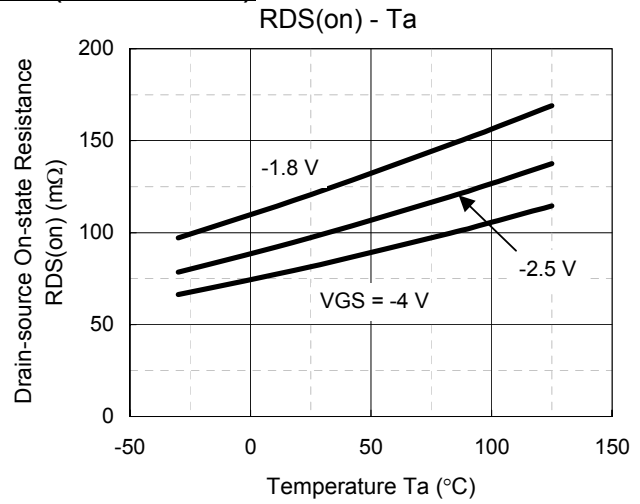
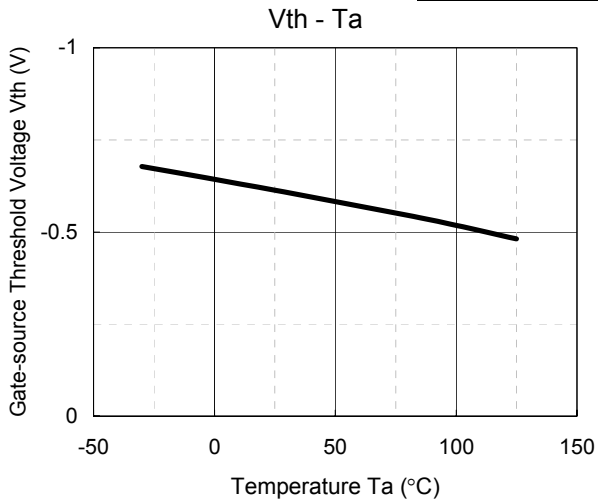
*2 Measurement circuit for Turn-on Delay Time / Rise Time / Turn-off Delay Time / Fall Time



Technical Data (reference)

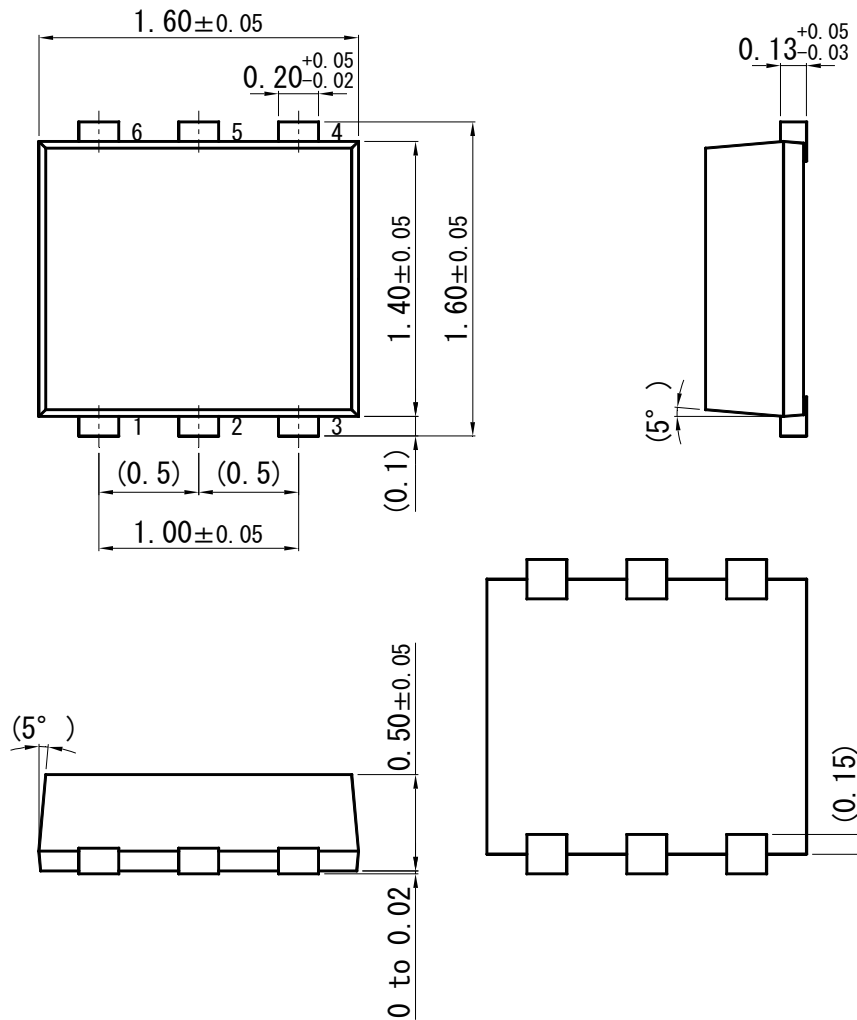


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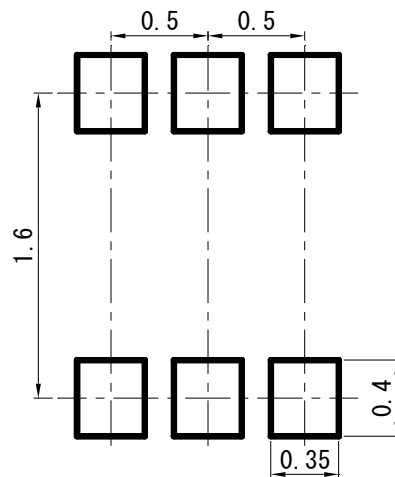


WSSMini6-F1

Unit : mm



■ Land Pattern (Reference) (Unit : mm)



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