



MOS FET
 MTM861280LBF

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 Silicon P-channel MOSFET

For Switching

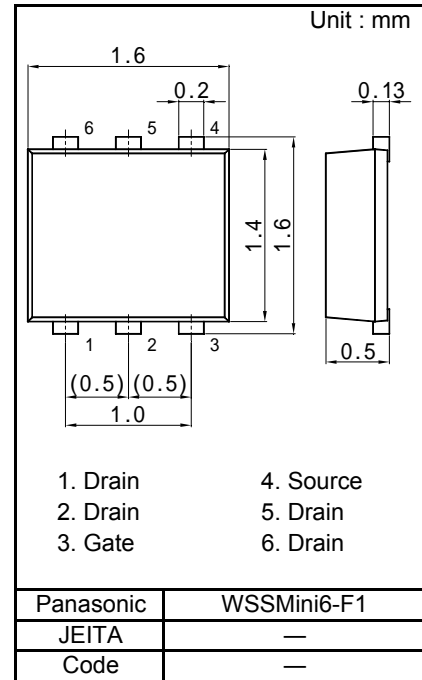
■ Features

- Low drain-source On-state Resistance
 : RDS(on) typ. = 300 mΩ (VGS = -4.0 V)
- Halogen-free / RoHS compliant
 (EU RoHS / UL-94 V-0 / MSL : Level 1 compliant)

■ Marking Symbol : ML

■ Packaging

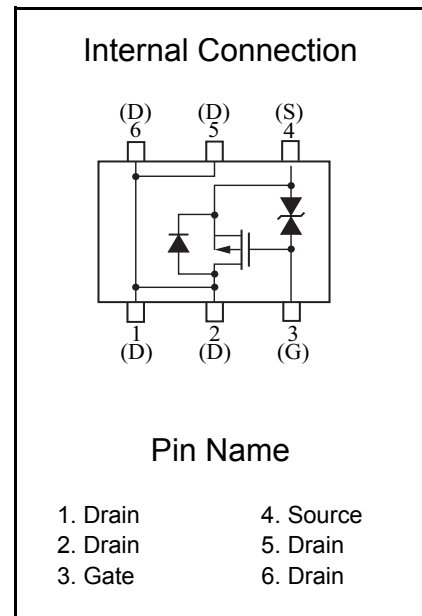
Embossed type (Thermo-compression sealing) : 10 000 pcs / reel (standard)



■ Absolute Maximum Ratings Ta = 25 °C

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	VDS	-20	V
Gate to Source Voltage	VGS	±12	
Drain Current	ID	-1.0	A
Drain Current (Pulsed) *1	IDp	-4.0	
Total Power Dissipation	PD1 *2	540	mW
	PD2 *3	150	
Channel Temperature	Tch	150	°C
Operating Ambient Temperature	Topr	-40 to +85	
Storage Temperature Range	Tstg	-55 to +150	

- Note) *1 $t \leq 10 \mu\text{s}$, 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

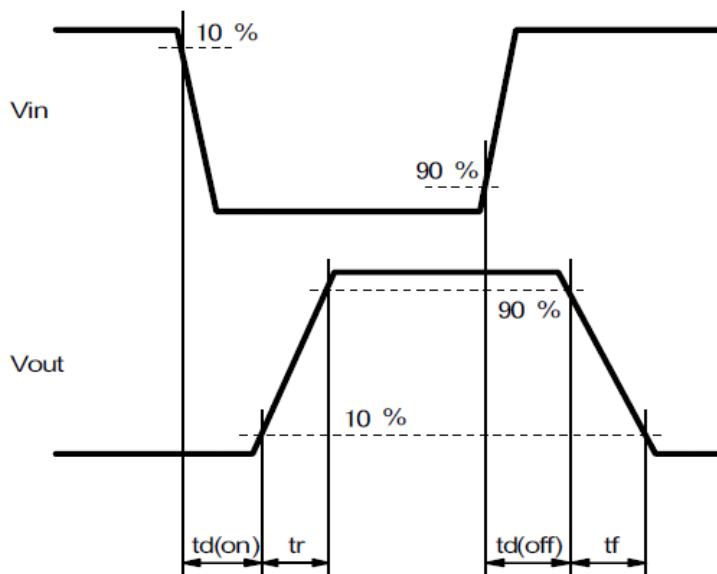
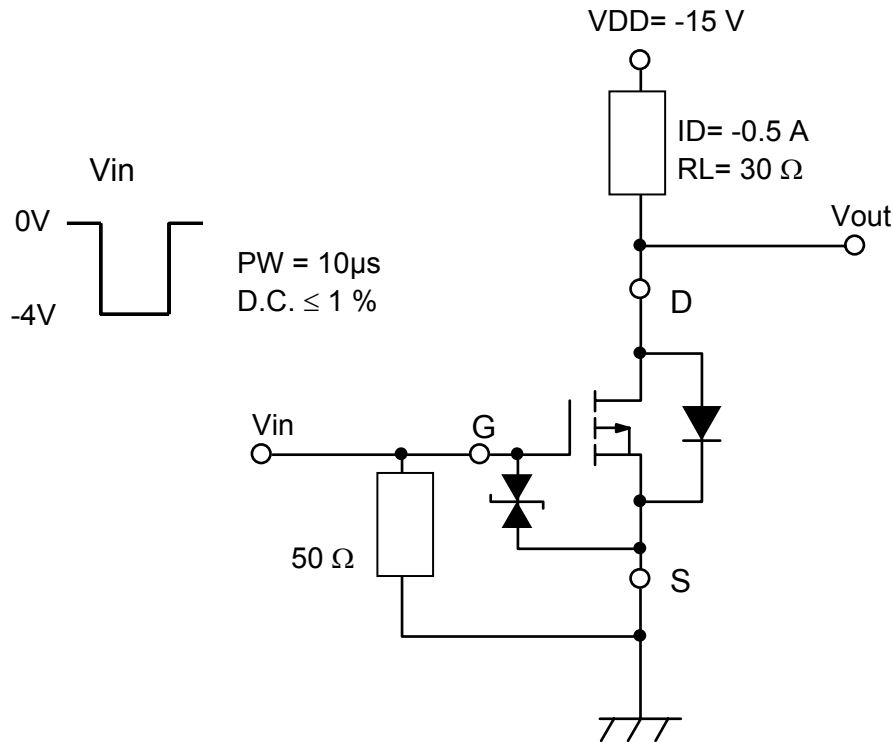
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source Breakdown Voltage	VDSS	ID = -1.0 mA, VGS = 0 V	-20			V
Zero Gate Voltage Drain Current	IDSS	VDS = -20 V, VGS = 0 V			-1.0	μA
Gate-source Leakage Current	IGSS	VGS = ±10 V, VDS = 0 V			±10	μA
Gate-source Threshold Voltage	Vth	ID = -1.0 mA, VDS = -10 V	-0.45	-1.0	-1.5	V
Drain-source On-state Resistance *1	RDS(on)1	ID = -0.5 A, VGS = -4.0 V		300	420	mΩ
	RDS(on)2	ID = -0.5 A, VGS = -2.5 V		420	560	
Forward transfer admittance *1	Yfs	ID = -0.5 A, VDS = -10 V	1.0	2.0		S
Input Capacitance	Ciss	VDS = -10 V, VGS = 0 V f = 1 MHz		80		pF
Output Capacitance	Coss			12		
Reverse Transfer Capacitance	Crss			12		
Turn-on Delay Time *2	td(on)	VDD = -15 V, VGS = 0 to -4 V		12		ns
Rise Time *2	tr	ID = -0.5 A		6		
Turn-off Delay Time *2	td(off)	VDD = -15 V, VGS = -4 to 0 V		17		ns
Fall Time *2	tf	ID = -0.5 A		10		

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

*1 Pulse test

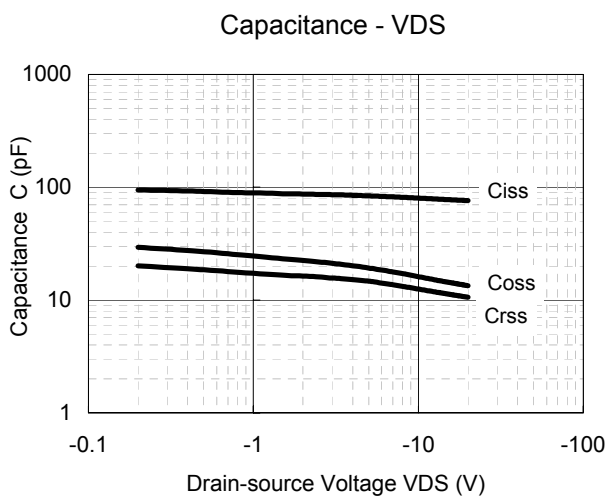
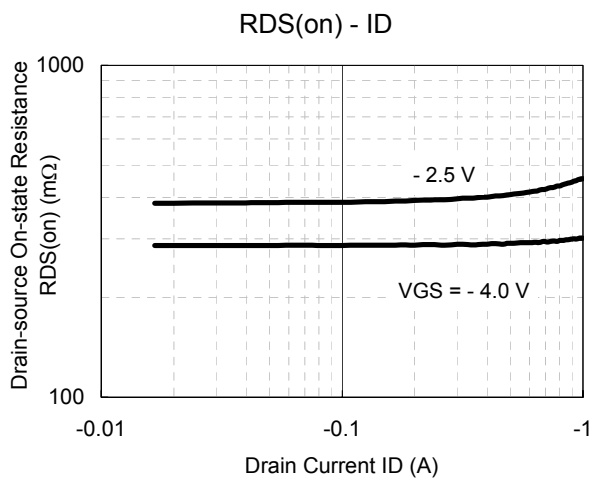
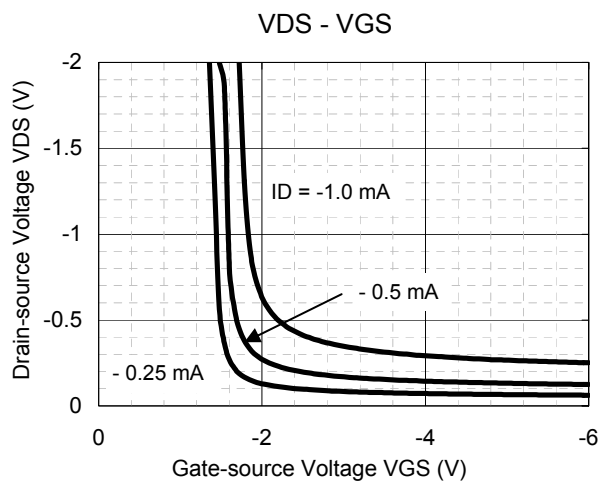
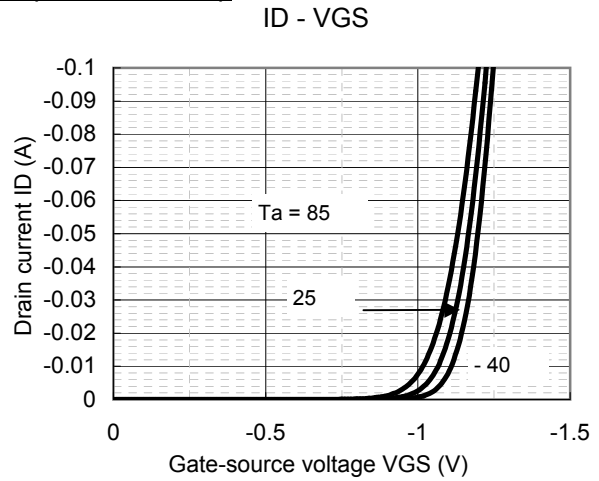
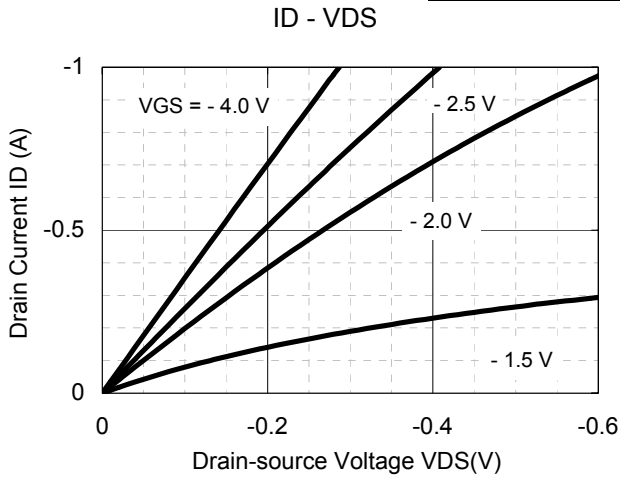
*2 Measurement circuit for Turn-on Delay Time / Rise Time / Turn-off Delay Time / Fall Time

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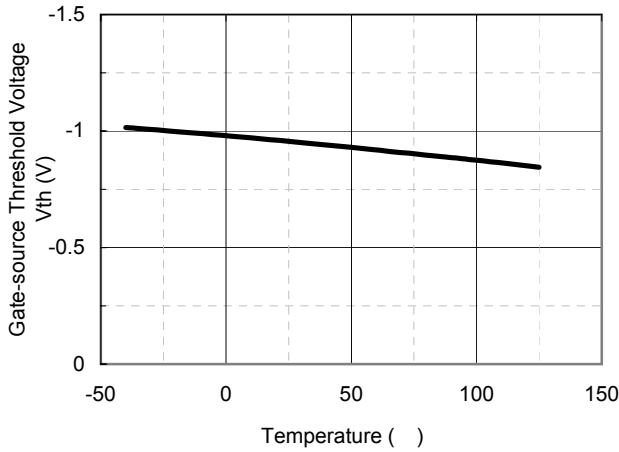
Technical Data (reference)



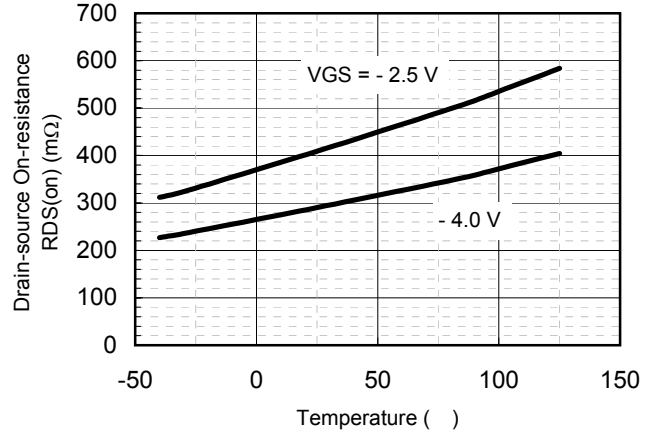


Technical Data (reference)

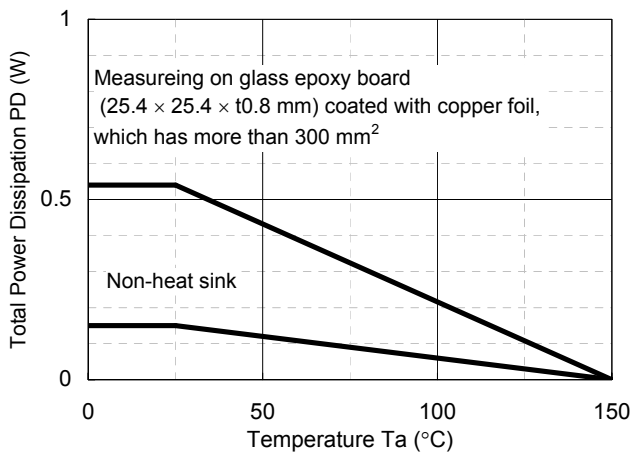
V_{th} - T_a



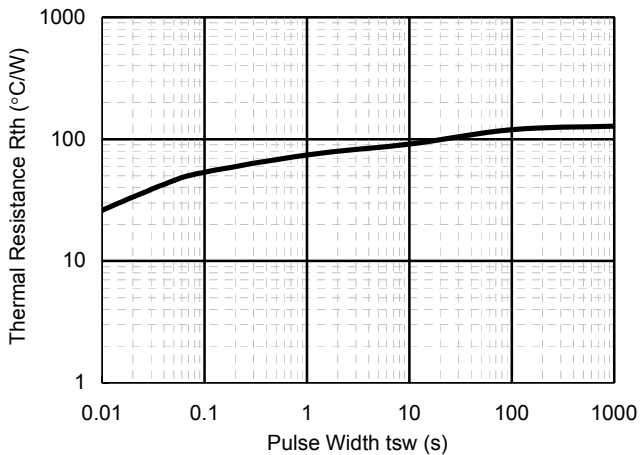
R_{DS(on)} - T_a



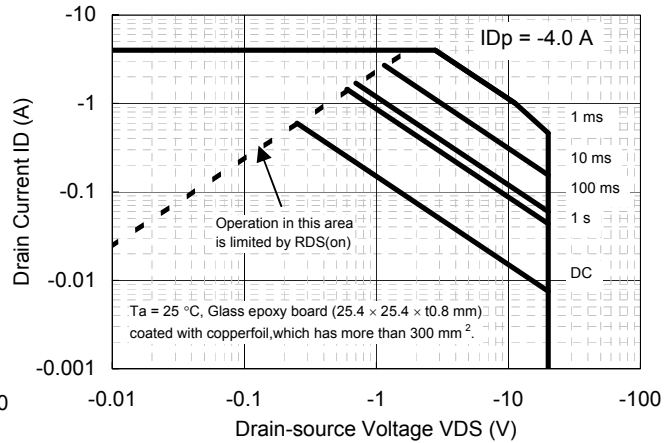
PD - T_a



R_{th} - t_{sw}



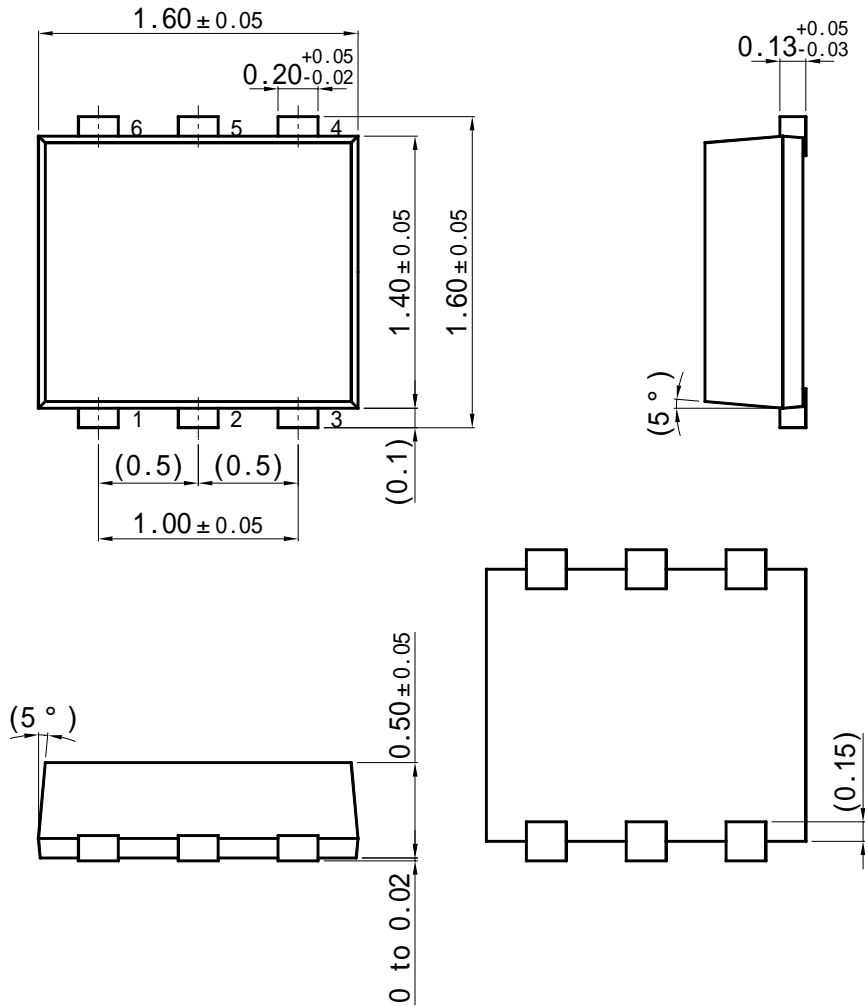
Safe Operating Area



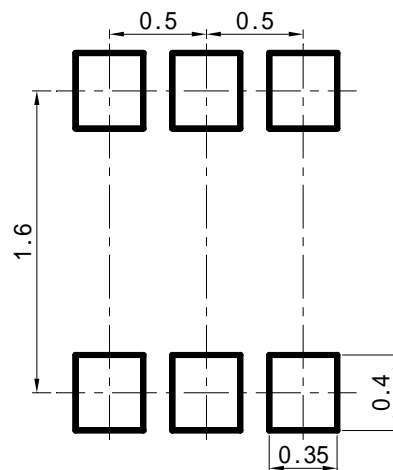


WSSMini6-F1

Unit : mm



■ Land Pattern (Reference) (Unit : mm)





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