

Panasonic

MOS FET

MTM861270LBF

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Silicon P-channel MOSFET

For Switching

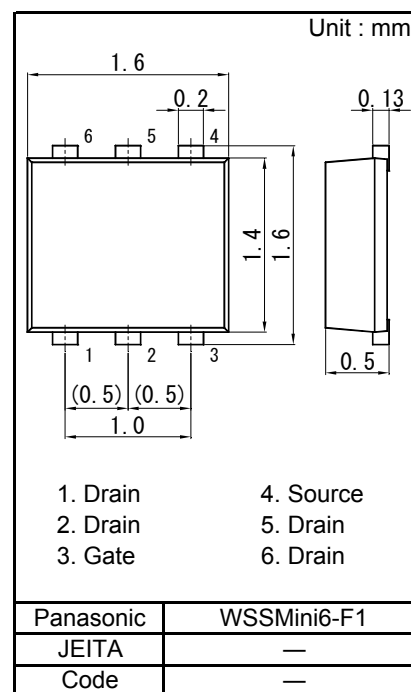
■ Features

- Low drain-source On-state Resistance : $R_{DS(on)}$ typ = $80\text{ m}\Omega$ ($V_{GS} = -4\text{ V}$)
- Low drive voltage : 1.8 V drive
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL : Level 1 compliant)

■ Marking Symbol : MK

■ Packaging

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



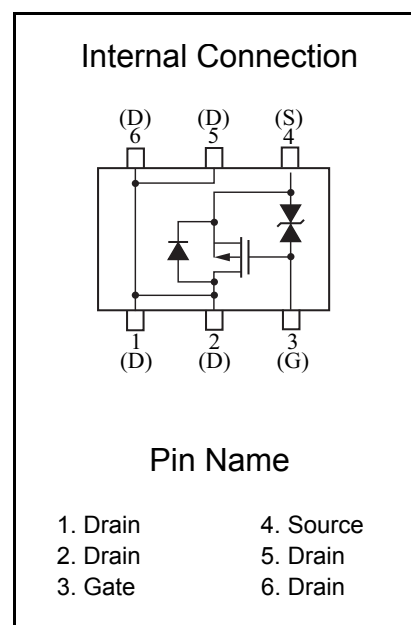
■ Absolute Maximum Ratings $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	V_{DS}	-20	V
Gate to Source Voltage	V_{GS}	± 10	
Drain Current	I_D	-2	A
Drain Current (Pulsed) ^{*1}	I_{Dp}	-8	
Total Power Dissipation	$PD1$ ^{*2}	540	mW
	$PD2$ ^{*3}	150	
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Operating Ambient Temperature	T_{opr}	-40 to +85	
Storage Temperature Range	T_{stg}	-55 to +150	

Note) ^{*1} $t \leq 10\text{ }\mu\text{s}$, Duty cycle $\leq 1\%$

^{*2} Glass epoxy substrate ($25.4 \times 25.4 \times t\text{ 0.8 mm}$) coated with copper foil (more than 300 mm^2)

^{*3} Non-heat sink



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

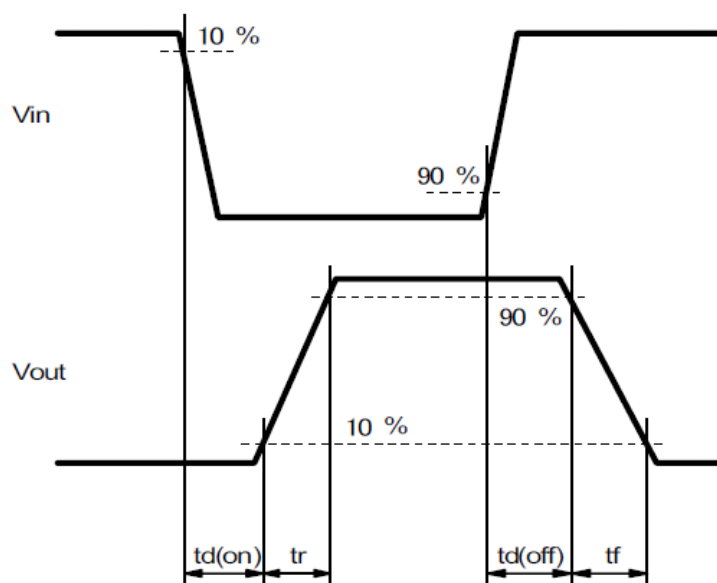
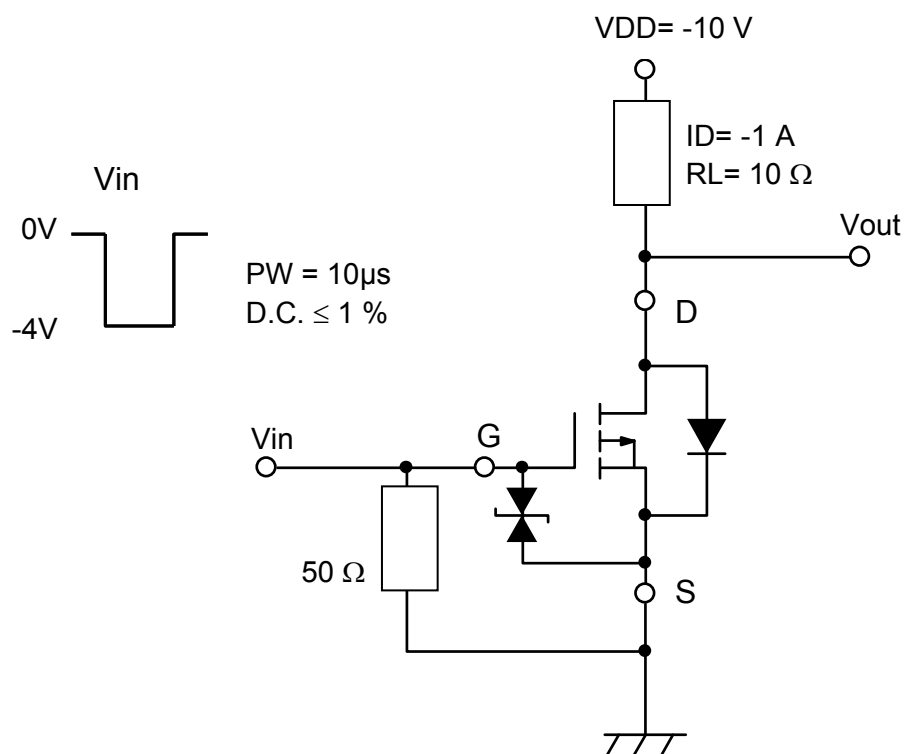
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source Breakdown Voltage	VDSS	ID = -1 mA, VGS = 0 V	-20			V
Zero Gate Voltage Drain Current	IDSS	VDS = -20 V, VGS = 0 V			-1	μA
Gate-source Leakage Current	IGSS	VGS = ±8 V, VDS = 0 V			±10	
Gate-source Threshold Voltage	Vth	ID = -1 mA, VDS = -10 V	-0.4	-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.

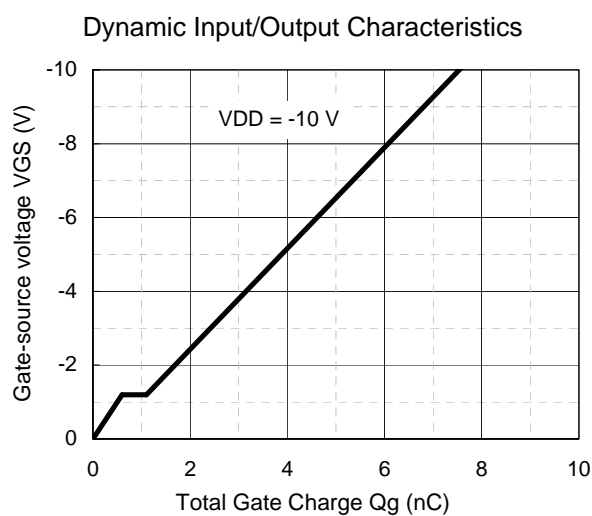
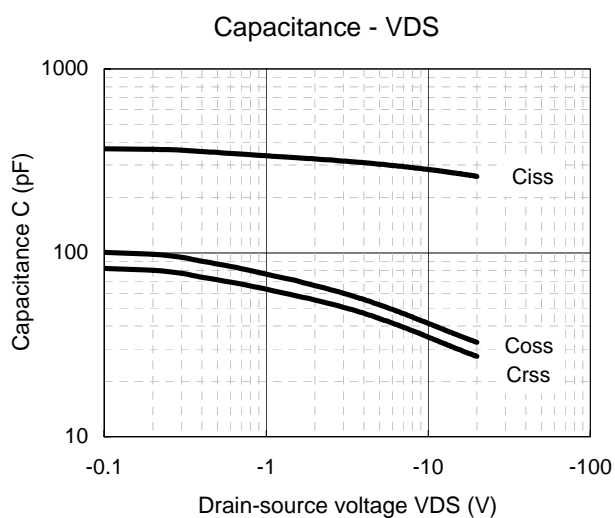
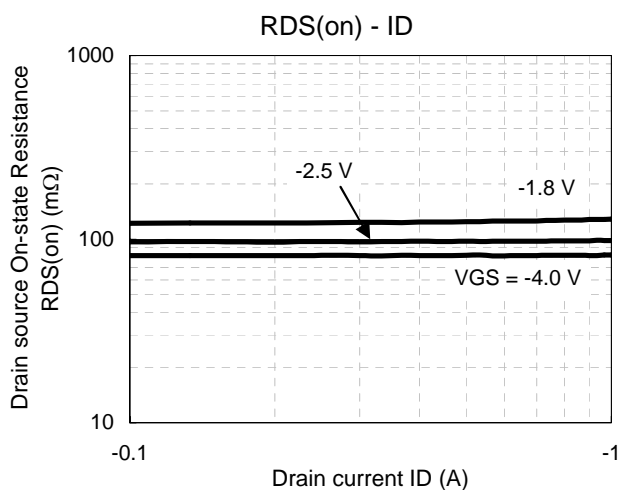
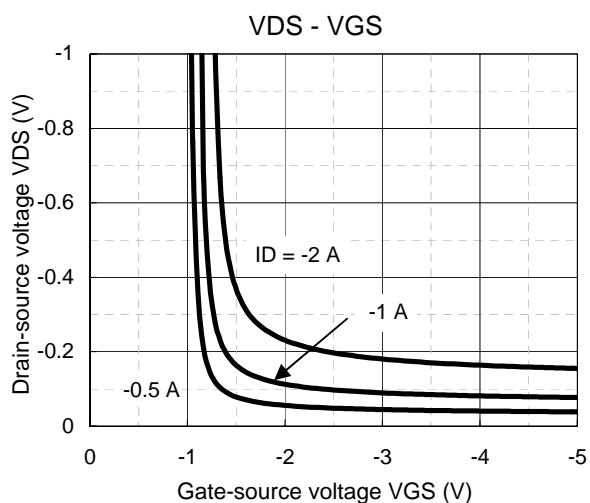
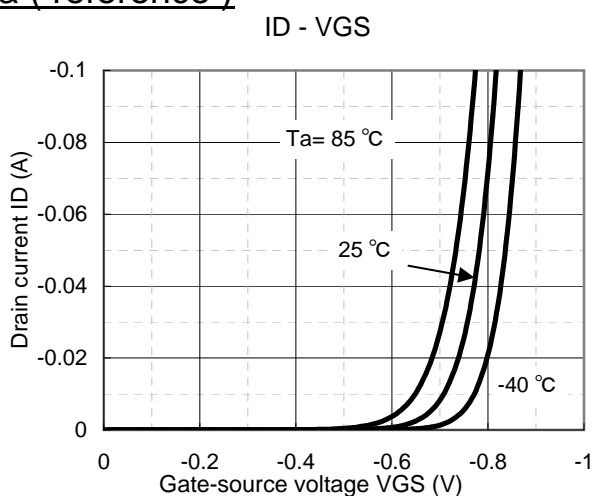
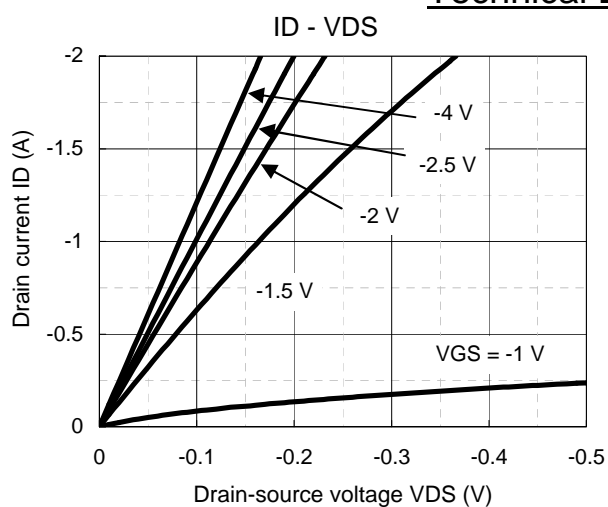
*1 Pulse test

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

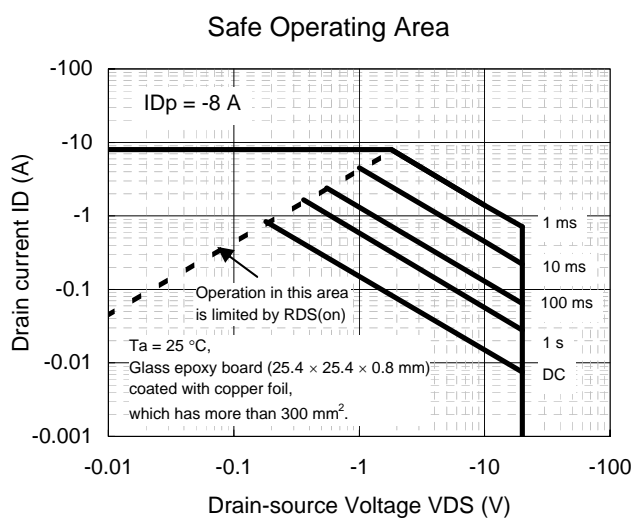
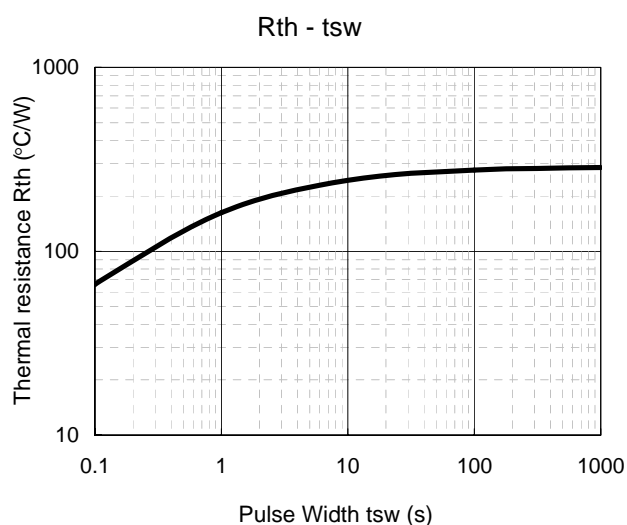
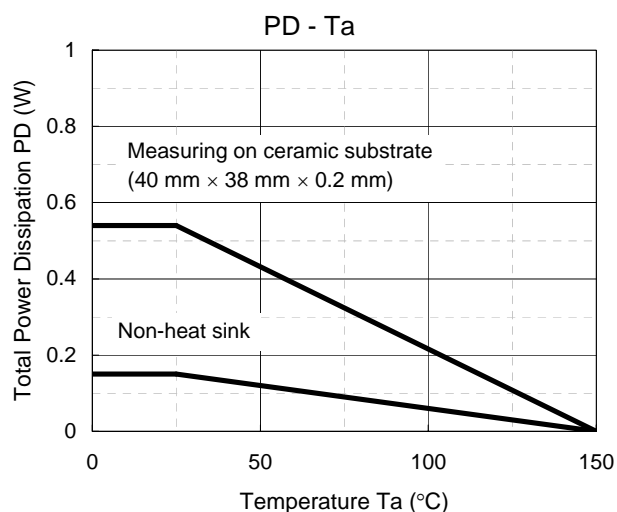
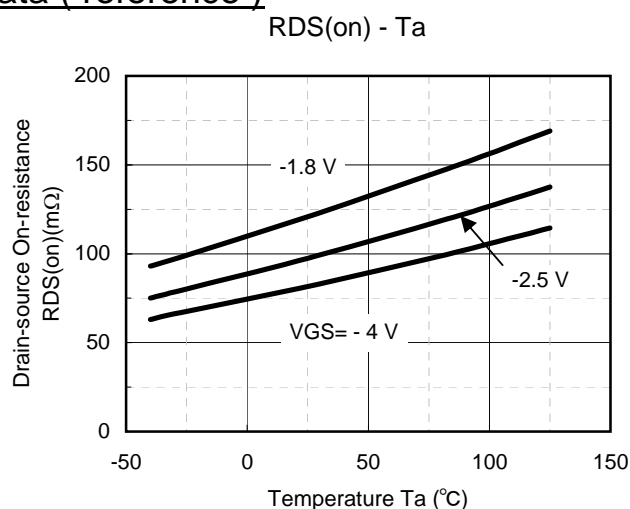
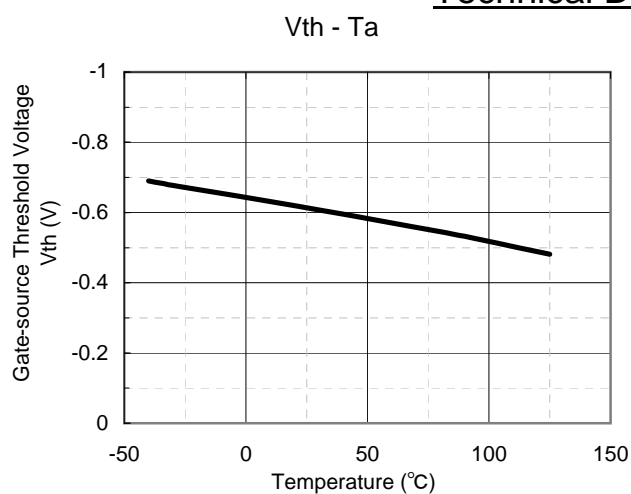
*2 Measurement circuit for Turn-on Delay Time / Rise Time / Turn-off Delay Time / Fall Time



Technical Data (reference)



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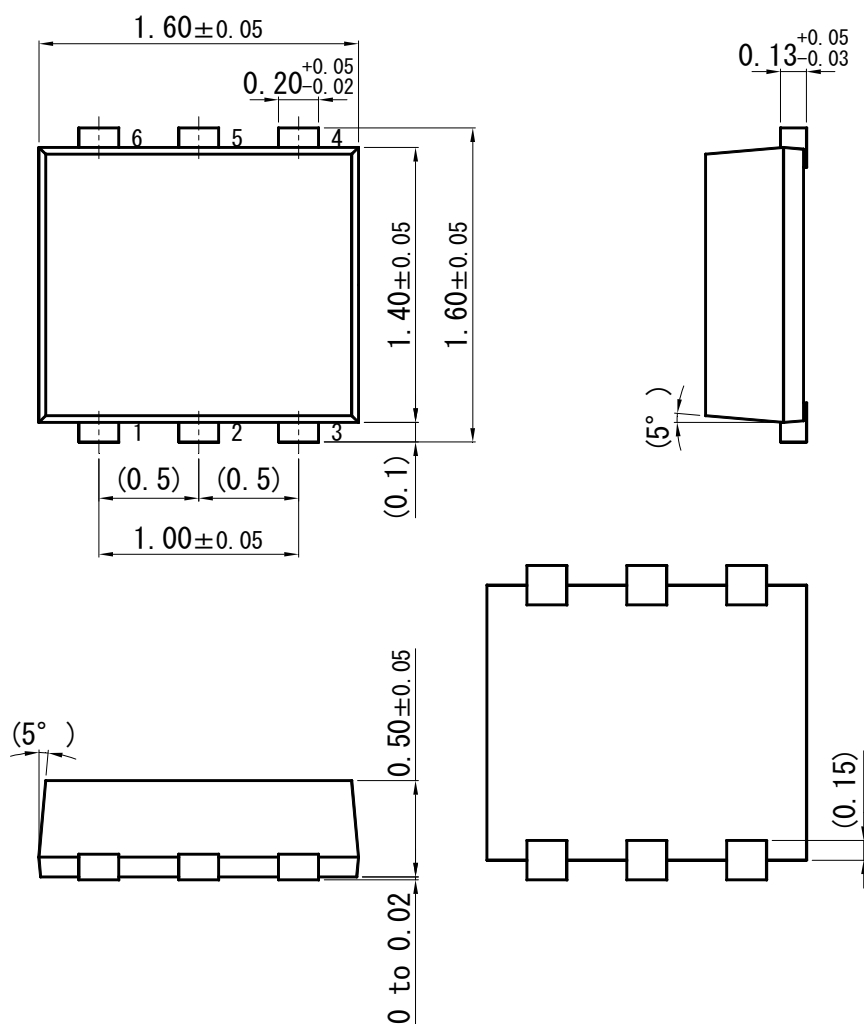


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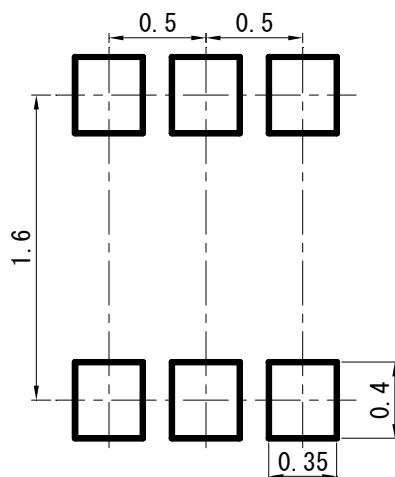
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WSSMini6-F1

Unit : mm



■ Land Pattern (Reference) (Unit : mm)



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