FK3F03080L

Silicon N-channel MOSFET

For switching circuits

■ Features

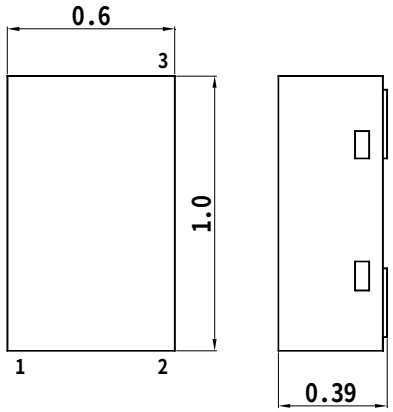
- Low drive voltage : 2.5 V drive
- Halogen-free / RoHS compliant
  (EU RoHS / UL-94 V-0 / MSL : Level 1 compliant)

■ Marking Symbol : X8

■ Packaging

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

Unit : mm



1. Gate
2. Source
3. Drain

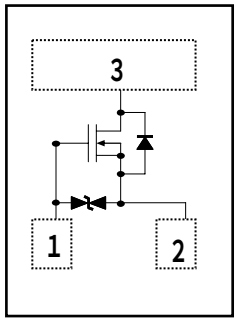
Panasonic	ML3-N4-B
JEITA	SC-101
Code	SOT-883

■ Absolute Maximum Ratings Ta = 25 °C

Parameter	Symbol	Rating	Unit
Drain to Source Voltage	VDS	30	V
Gate to Source Voltage	VGS	±20	
Drain Current	ID	100	mA
Drain Current (Pulsed) *1	IDp	200	
Total Power Dissipation	PD	100	mW
Channel Temperature	Tch	150	°C
Storage Temperature Range	Tstg	-55 to +150	

Note *1 Pulse test: Ensure that the channel temperature does not exceed 150 °C

Internal Connection



Pin Name

1. Gate
2. Source
3. Drain

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■ 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	30			V
Zero Gate Voltage Drain Current	IDSS	VDS = 30 V, VGS = 0 V			1	μA
Gate-source Leakage Current	IGSS	VGS = ±16 V, VDS = 0 V			±10	μA
Gate-source Threshold Voltage	Vth	ID = 6.9 μA, VDS = 10 V	0.6		2.0	V
Drain-source On-state Resistance	RDS(on)1	ID = 10 mA, VGS = 2.5 V		4.0	12	Ω
	RDS(on)2	ID = 100 mA, VGS = 4.5 V		1.0	1.4	
Input Capacitance	Ciss	VDS = 10 V, VGS = 0 V f = 1 MHz		11		pF
Output Capacitance	Coss			6.8		
Reverse Transfer Capacitance	Crss			3.5		
Turn-on Delay Time *1	ton	VDD = 3 V, VGS = 0 to 3 V ID = 10 mA, RL = 300 Ω		20		ns
Turn-off Delay Time *1	toff	VDD = 3 V, VGS = 3 to 0 V ID = 10 mA, RL = 300 Ω		100		ns

Note : 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

2. *1 Measurement circuit for Turn-on Delay Time / Turn-off Delay Time

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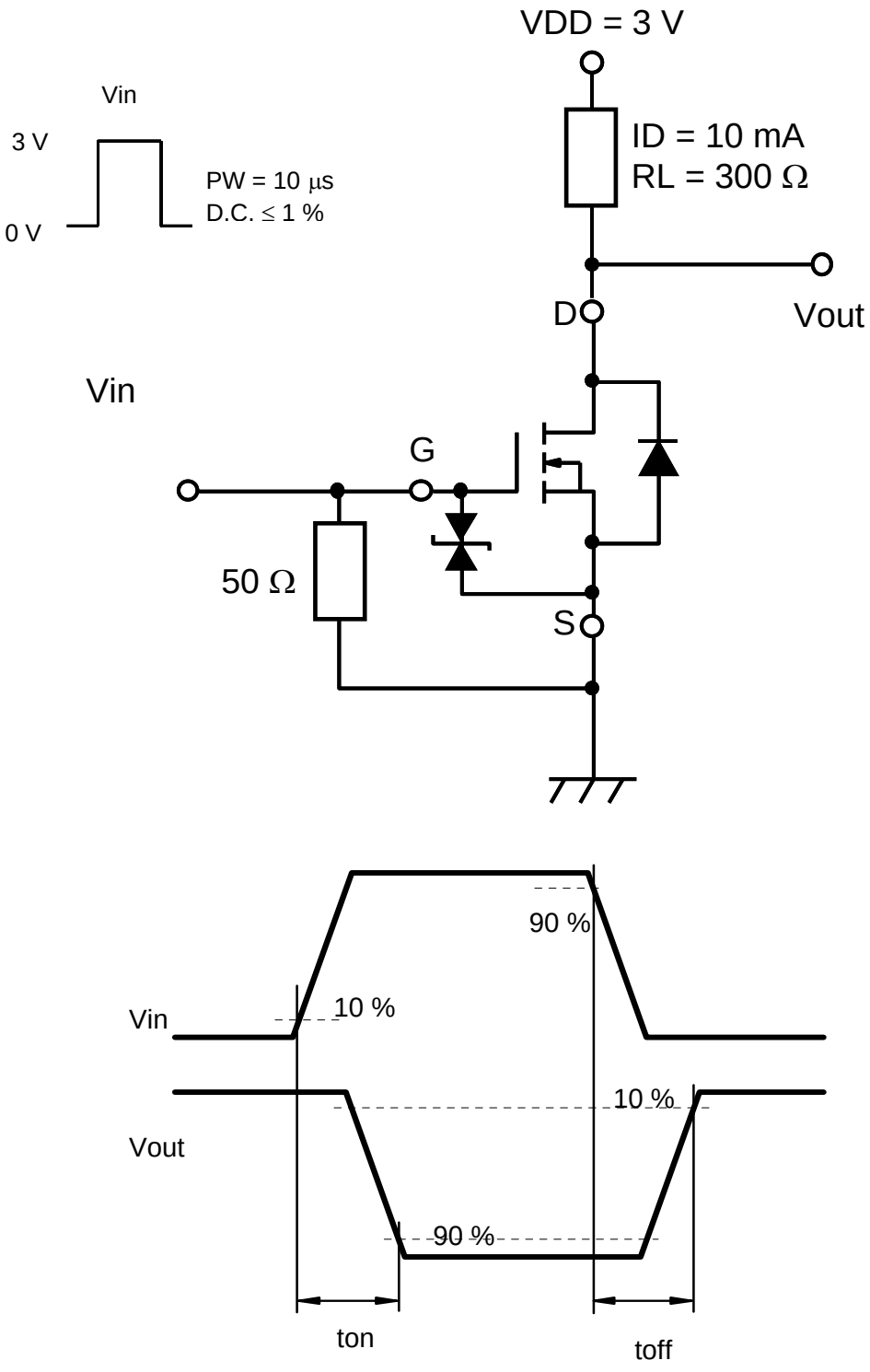
*1 Measurement circuit for Turn-on Delay Time / Turn-off Delay Time



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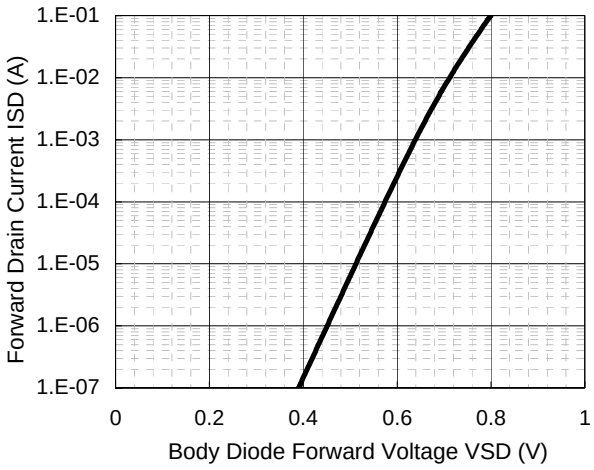
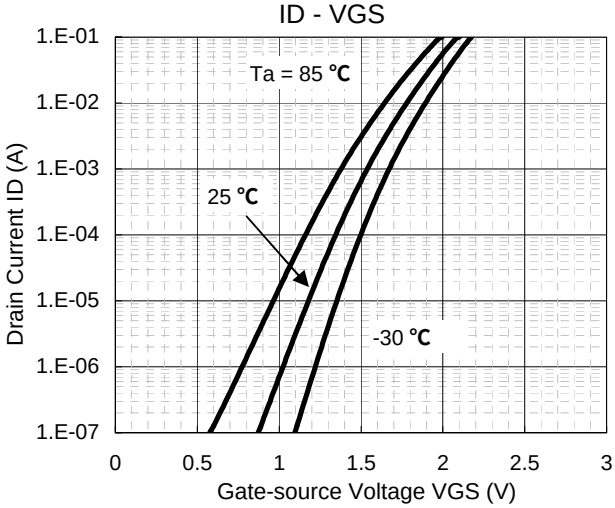
Technical Data (reference)

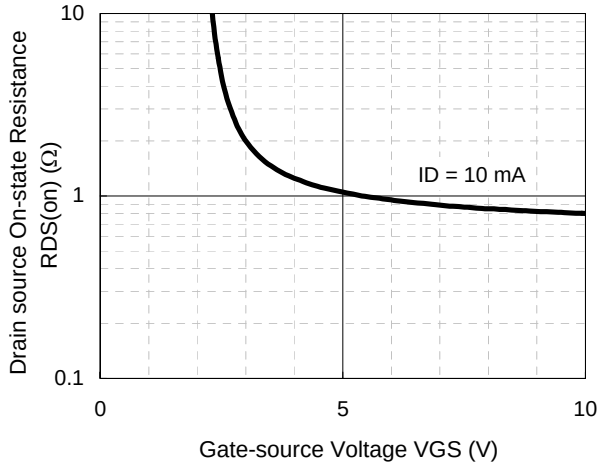
ISD - VSD



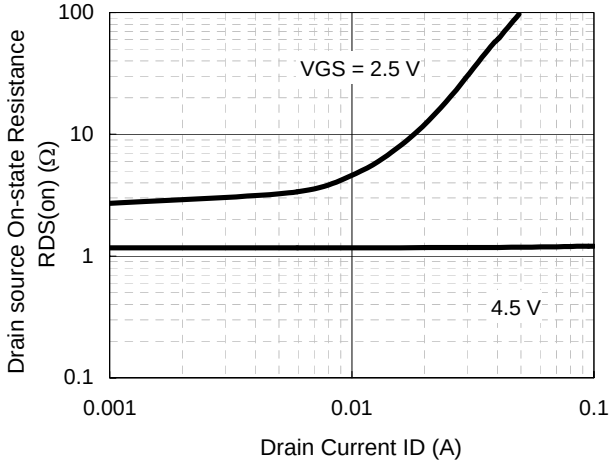
ID - VGS



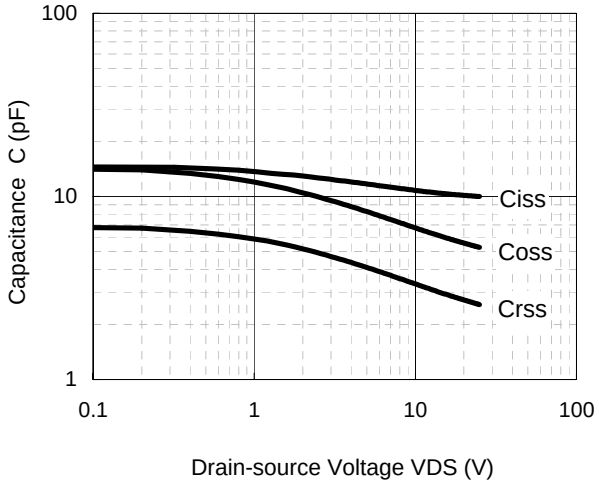
RDS(on) - VGS



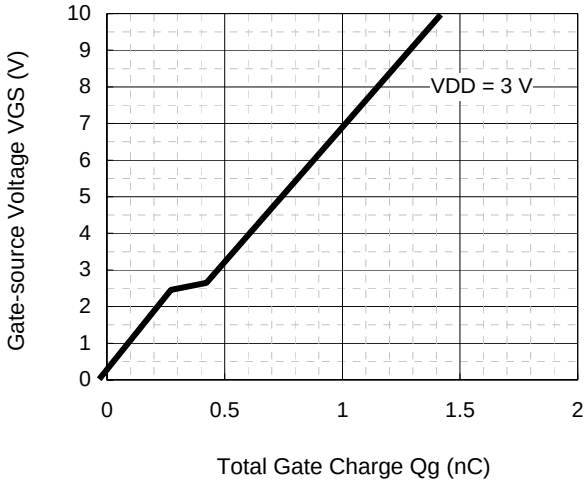
RDS(on) - ID



Capacitance - VDS



Dynamic Input/Output Characteristics



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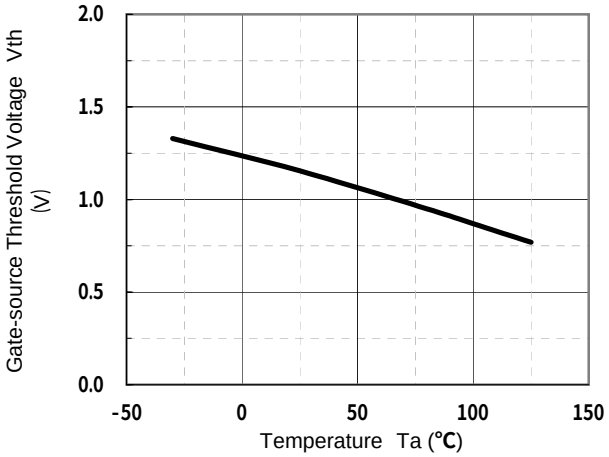
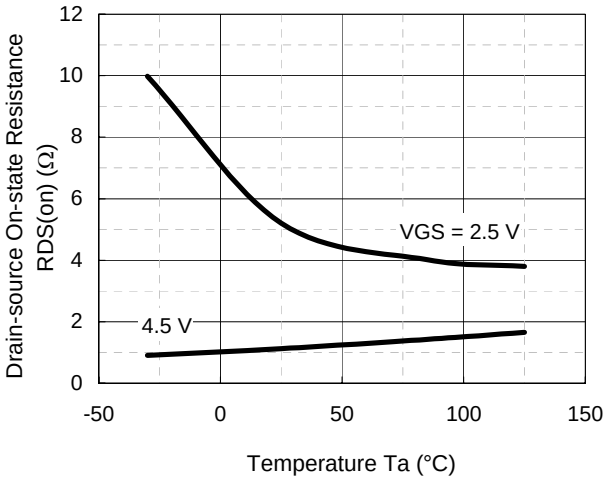
Technical Data (reference)

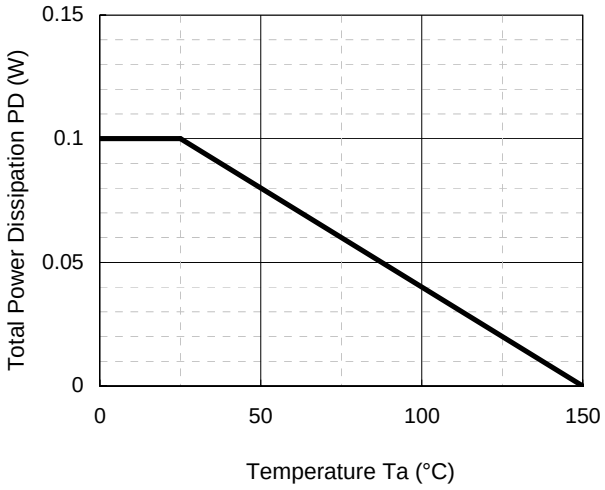
Vth - Ta



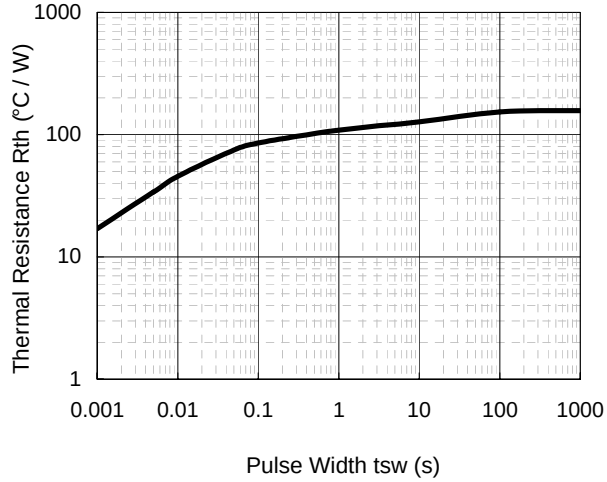
RDS(on) - Ta



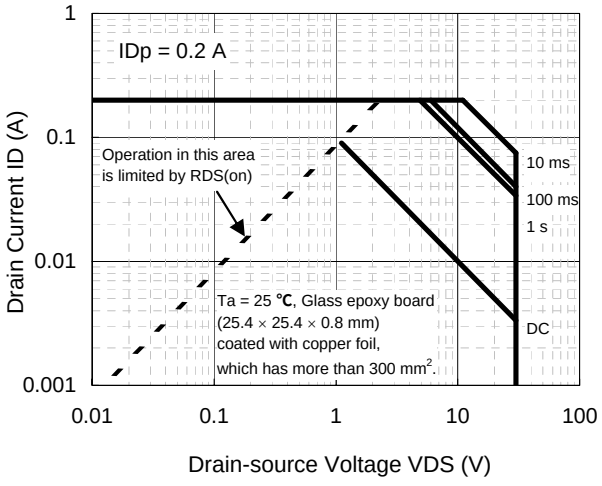
PD - Ta



Rth - tsw



Safe Operating Area



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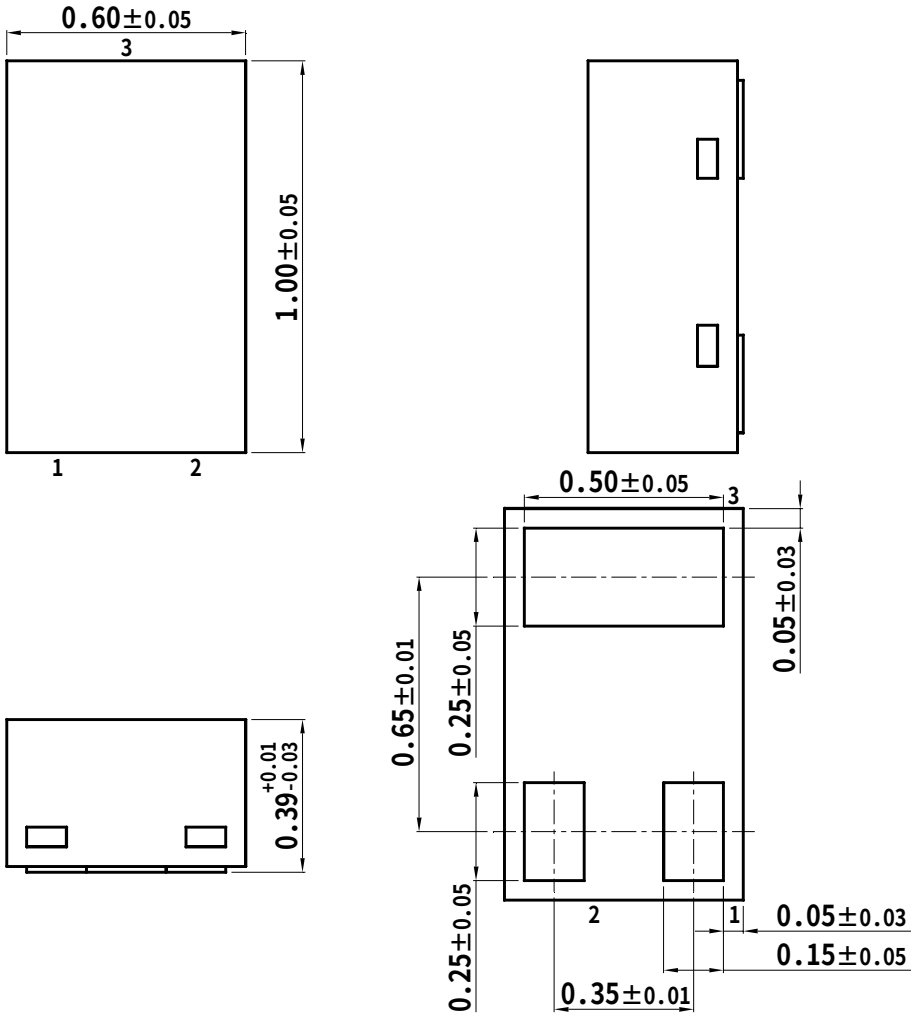
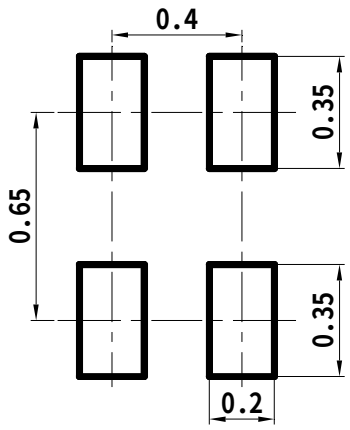
ML3-N4-B

Unit : mm



■ Land Pattern (Reference) (Unit : mm)



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