

# FK3303010L

Silicon N-channel MOSFET

For switching

FK350301 in SSSMini3 type package

■ Features

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

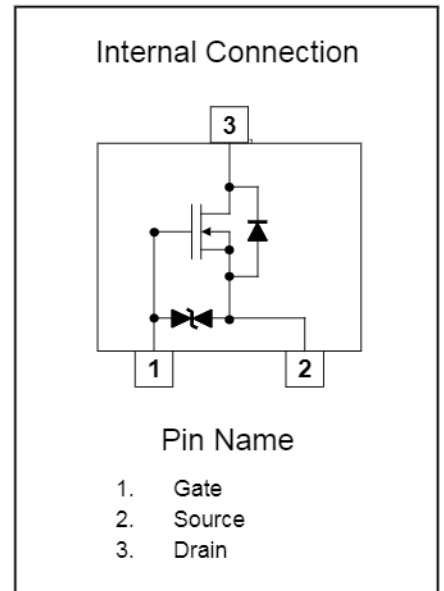
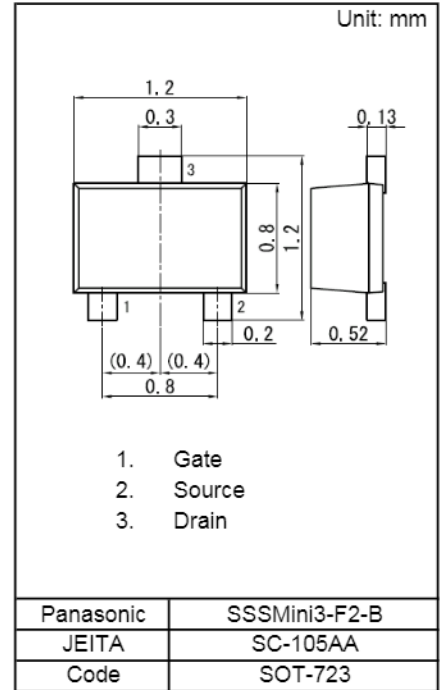
■ Marking Symbol: X1

■ Packaging

FK3303010L Embossed type (Thermo-compression sealing):  
10 000 pcs / reel (standard)

■ Absolute Maximum Ratings Ta = 25 °C

Parameter	Symbol	Rating	Unit
Drain-source Voltage	VDS	30	V
Gate-source Voltage	VGS	±12	V
Drain Current	ID	100	mA
Drain Current(Pulsed)	IDp	200	mA
Total Power Dissipation	PD	100	mW
Channel Temperature	Tch	150	°C
Storage Temperature	Tstg	-55 to +150	°C



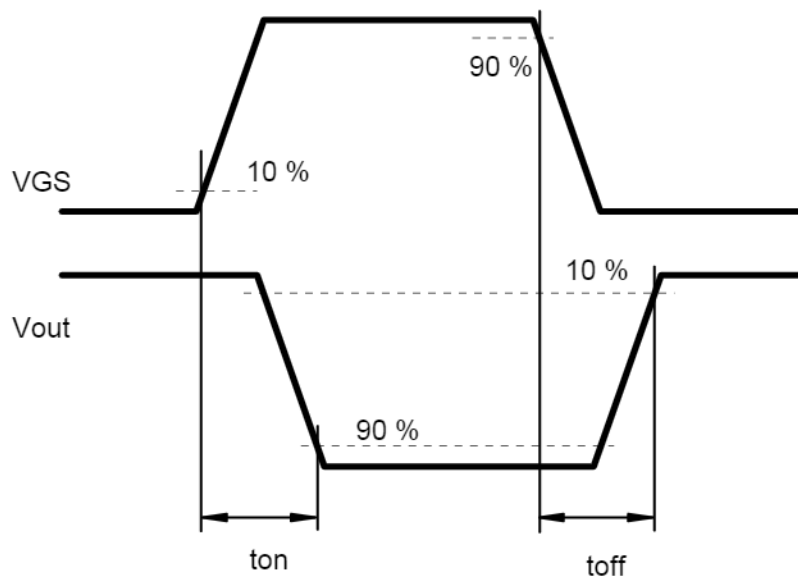
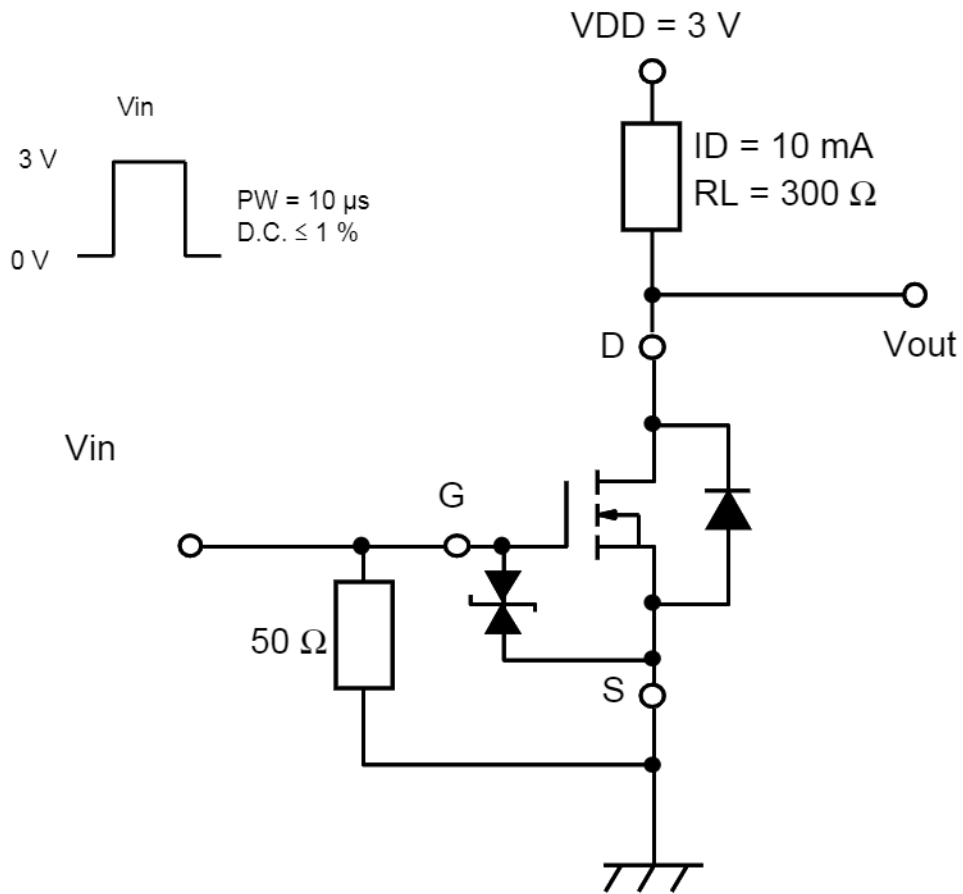
■ Electrical Characteristics Ta = 25 °C ± 3 °C

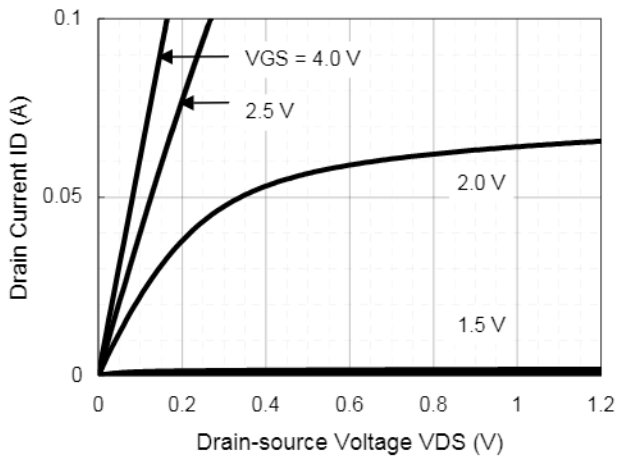
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source Breakdown Voltage	VDSS	ID = 1mA, VGS = 0 V	30			V
Zero Gate Voltage Drain Current	IDSS	VDS = 30 V, VGS = 0 V			1.0	μA
Gate-source Leakage Current	IGSS	VGS = ±10 V, VDS = 0 V			±10	μA
Gate-source Threshold Voltage	Vth	ID = 1.0 μA, VDS = 3.0 V	0.5	1.0	1.5	V
Drain-source On-state Resistance	RDS(on)1	ID = 10 mA, VGS = 2.5 V		3	6	Ω
	RDS(on)2	ID = 10 mA, VGS = 4.0 V		2	3	
Forward Transfer Admittance	Yfs	ID = 10 mA, VDS = 3.0 V	20	55		mS
Input Capacitance	Ciss	VDS = 3 V, VGS = 0 V, f = 1 MHz		12		pF
Output Capacitance	Coss			7		pF
Reverse Transfer Capacitance	Crss			3		pF
Turn-on delay time *1	ton	VDD = 3 V, VGS = 0 V to 3 V RL=300Ω		100		ns
Turn-off delay time *1	toff	VDD = 3 V, VGS = 3 V to 0 V RL=300Ω		100		ns

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

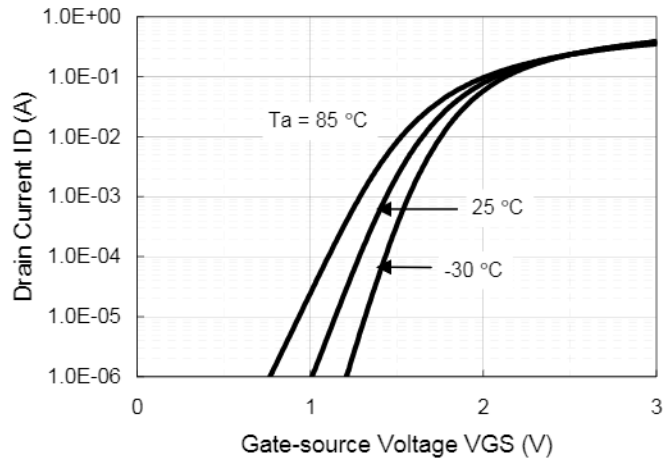
\*1 ton , toff measurement circuit

\*1 ton , toff measurement circuit

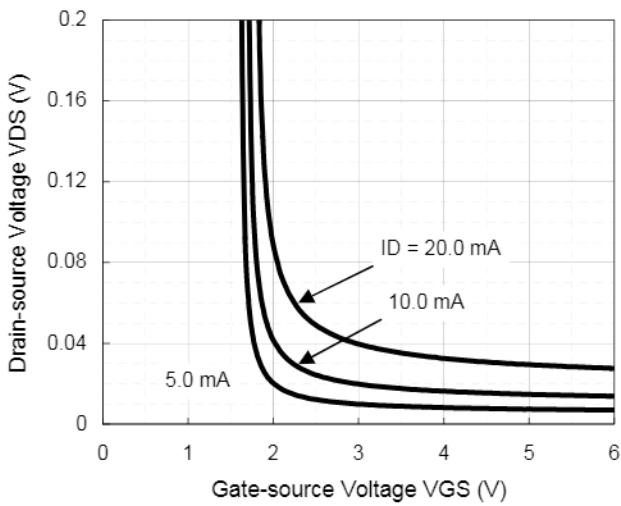




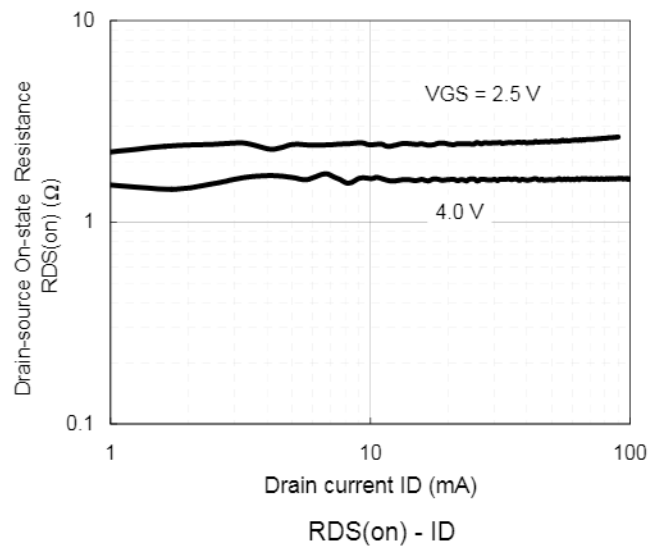
ID - VDS



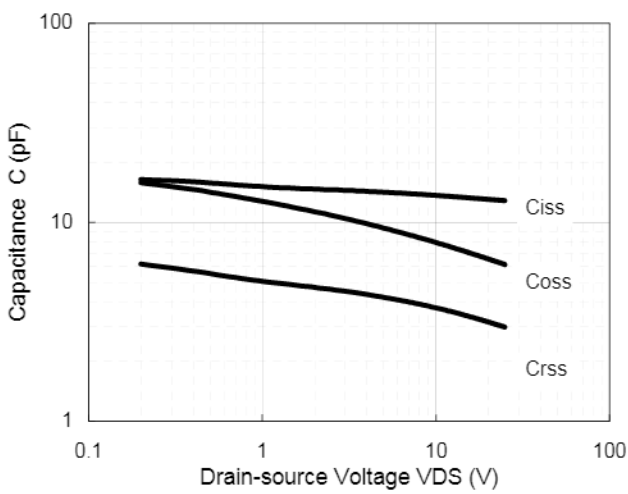
ID - VGS



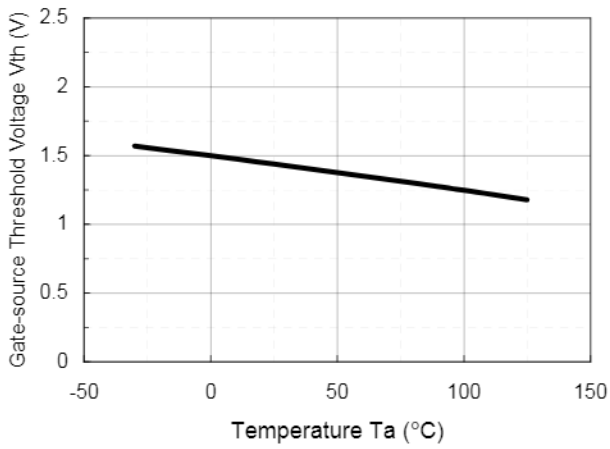
VDS - VGS



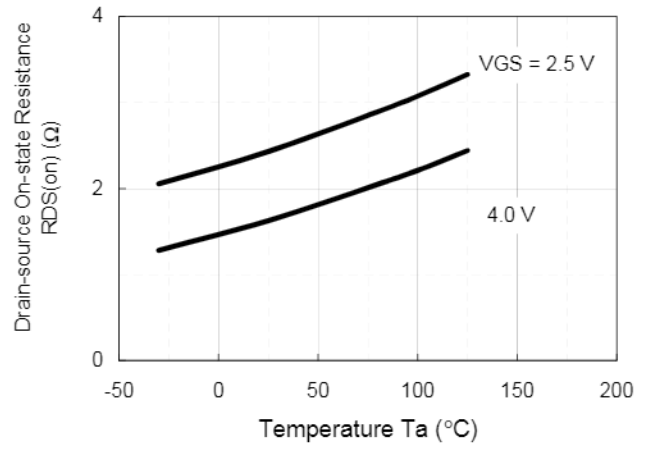
RDS(on) - ID



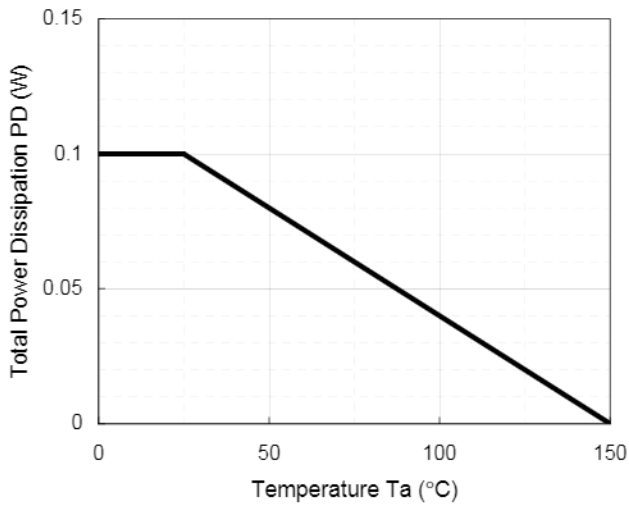
Capacitance - VDS



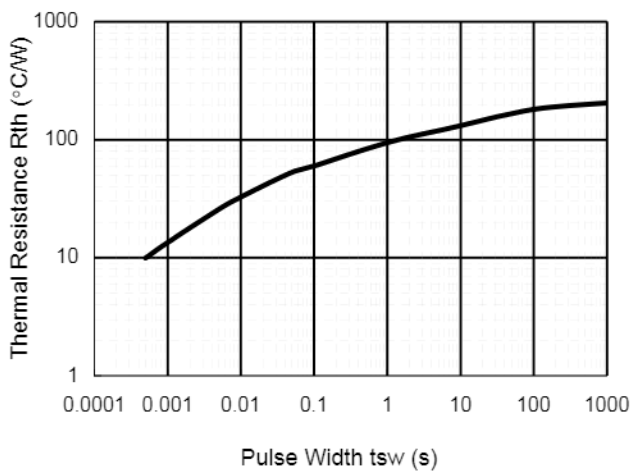
$V_{th}$  -  $T_a$



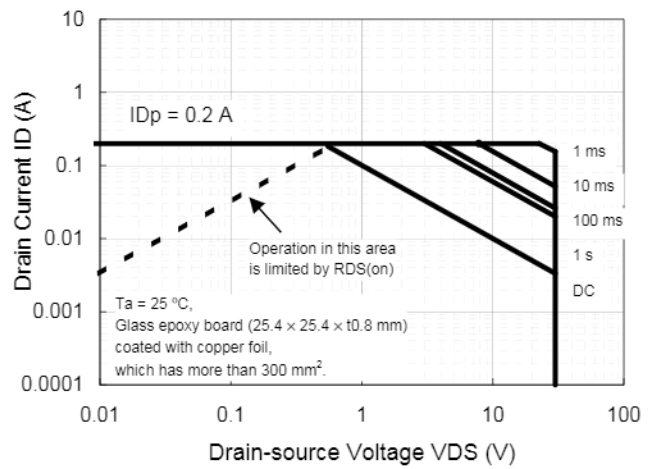
$R_{DS(on)}$  -  $T_a$



$P_D$  -  $T_a$



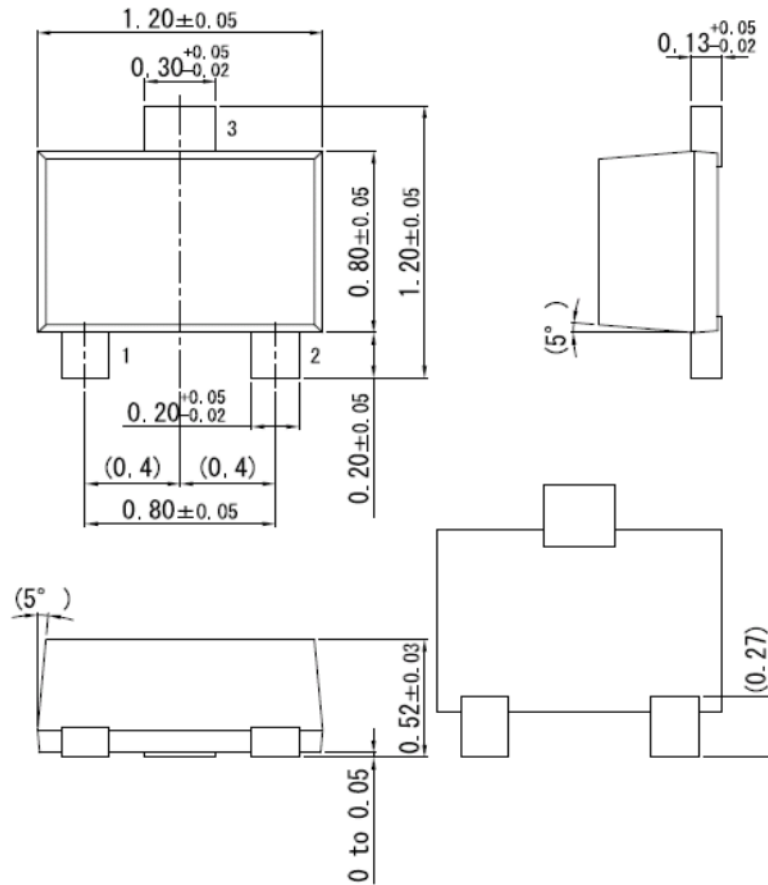
$R_{th}$  -  $t_{sw}$



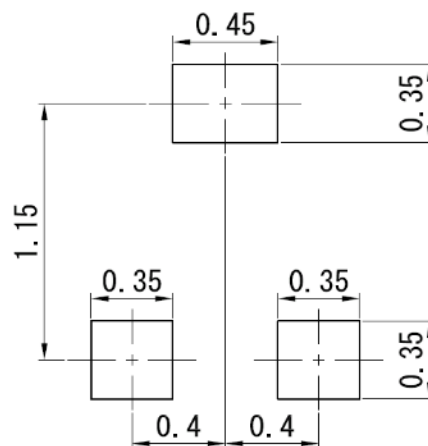
Safe Operating Area

SSSMini3-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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