MOS FET

Panasonic FC6946010R

FC6946010R

Dual N-channel MOS FET

For switching

■ Features

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

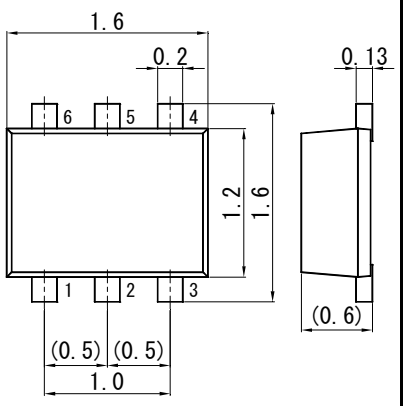
■ Marking Symbol : V6

■ Basic Part Number : Dual FK390601 (Individual)

■ Packaging

Embossed type (Thermo-compression sealing): 8 000 pcs / reel (standard)

Unit : mm



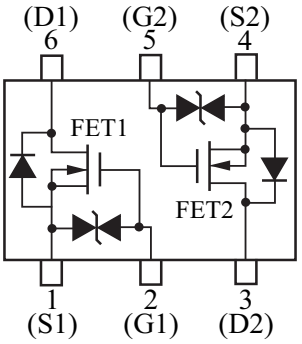
1. Source(FET1) 4. Source(FET2)
2. Gate(FET1) 5. Gate(FET2)
3. Drain(FET2) 6. Drain(FET1)

Panasonic	SSMini6-F3-B
JEITA	SC-107C
Code	SOT-666

■ Absolute Maximum Ratings Ta = 25 °C

	Parameter	Symbol	Rating	Unit
FET1 FET2	Drain-source breakdown voltage	VDSS	60	V
	Gate-source breakdown voltage	VGSS	±12	V
	Drain current	ID	100	mA
	Pulse drain current	IDp	200	mA
Overall	Total power dissipation	PT	125	mW
	Channel temperature	Tch	150	°C
	Operating ambient temperature	Topr	-40 to +85	°C
	Storage temperature	Tstg	-55 to +150	°C

Internal Connection



Pin name

1. Source(FET1) 4. Source(FET2)
2. Gate(FET1) 5. Gate(FET2)
3. Drain(FET2) 6. Drain(FET1)

Established : 2010-06-25
Revised : 2013-07-04

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

FET1,FET2

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Drain-source breakdown voltage	VDSS	ID = 1 mA, VGS = 0	60			V
Drain-source cutoff current	IDSS	VDS = 60 V, VGS = 0			1.0	μA
Gate-source cutoff current	IGSS	VGS = ±10 V, VDS = 0			±10	μA
Gate threshold voltage	VTH	ID = 1.0 μA, VDS = 3.0 V	0.9	1.2	1.5	V
Drain-source ON resistance	RDS(on)1	ID = 10 mA, VGS = 2.5 V		8	15	Ω
	RDS(on)2	ID = 10 mA, VGS = 4.0 V		6	12	Ω
Forward transfer admittance	|Yfs|	ID = 10 mA, VDS = 3.0 V	20	60		mS
Input capacitance	Ciss	VDS = 3 V, VGS = 0, f = 1 MHz		12		pF
Output capacitance	Coss			7		pF
Reverse transfer capacitance	Crss			3		pF
Turn-on time *1	ton	VDD = 3 V, VGS = 0 to 3 V ID = 10 mA		100		ns
Turn-off time *1	toff	VDD = 3 V, VGS = 3 to 0 V ID = 10 mA		100		ns

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.
2. *1 Turn-on and Turn-off test circuit

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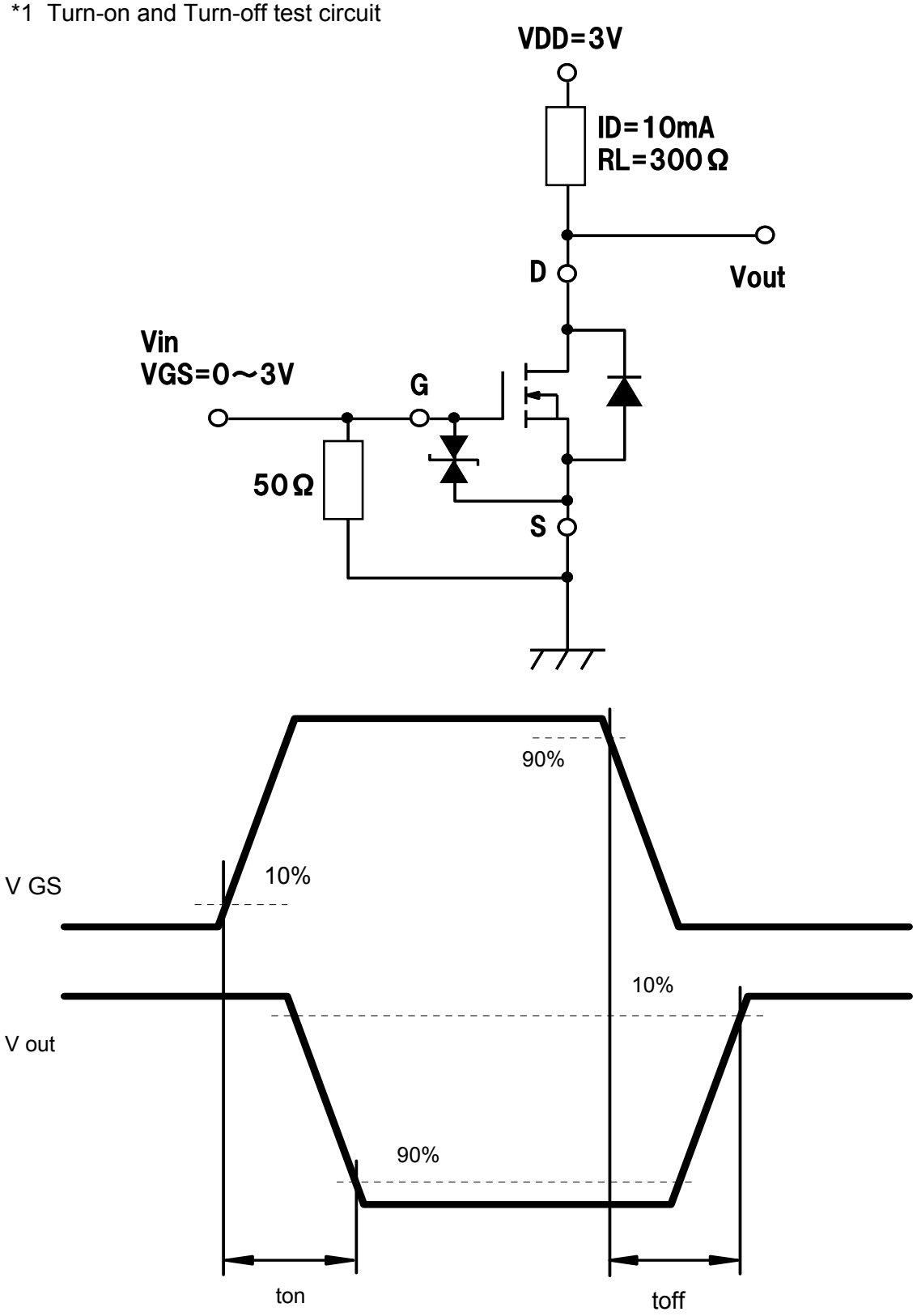
*1 Turn-on and Turn-off test circuit



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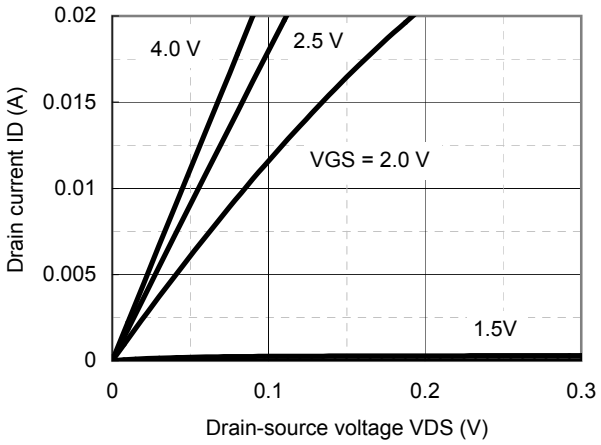
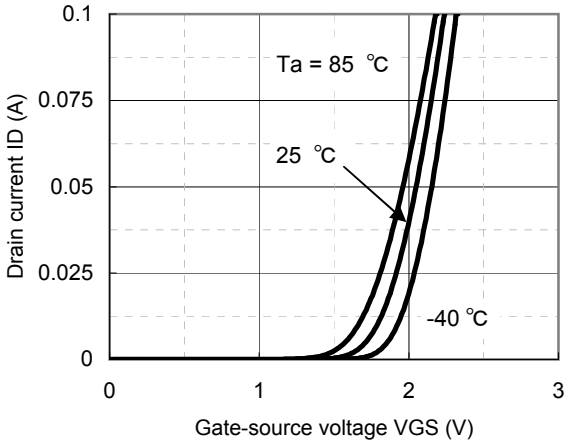
Technical Data (reference)

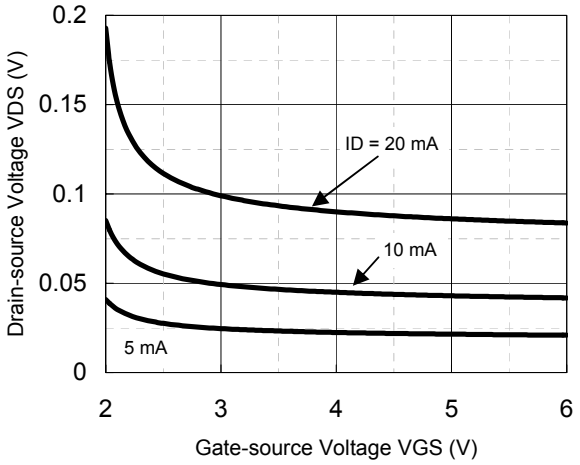
ID - VDS



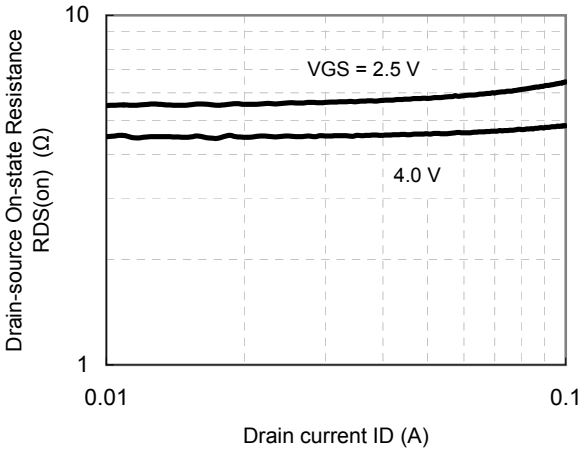
ID - VGS



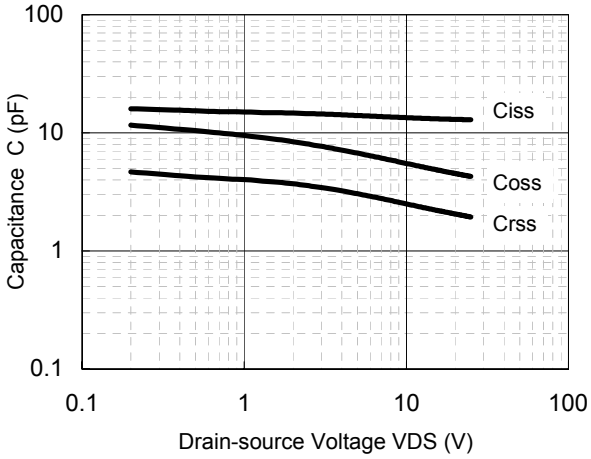
VDS - VGS



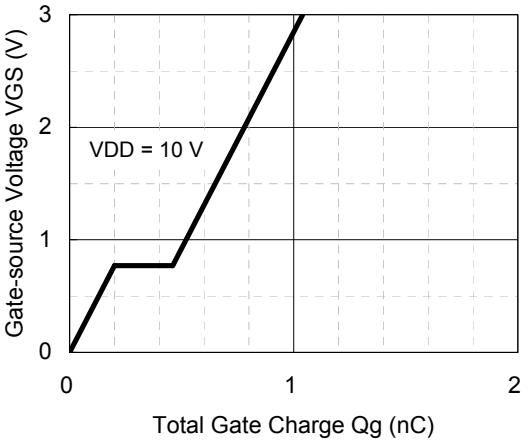
RDS(on) - ID



Capacitance - VDS



Dynamic Input/Output Characteristics



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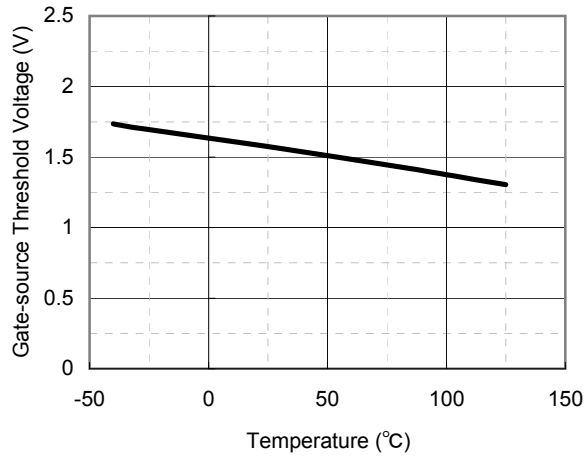
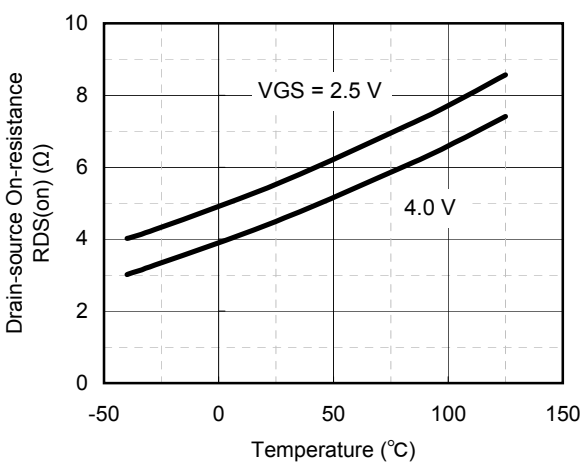
Technical Data (reference)

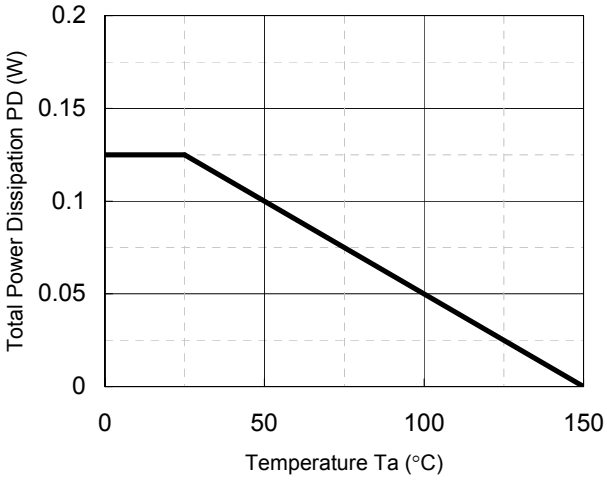
Vth - Ta



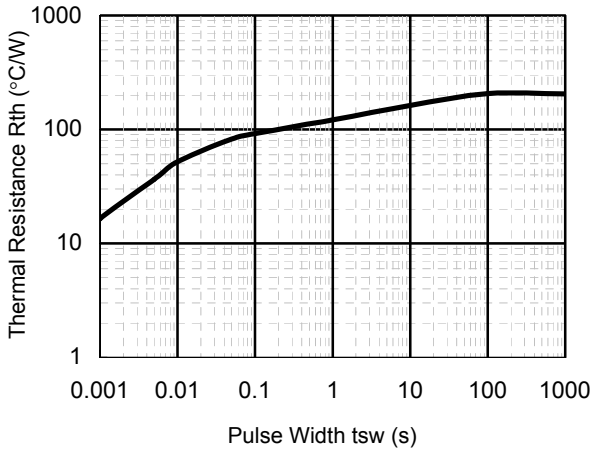
RDS(on) - Ta



PD - Ta



Rth - tsw



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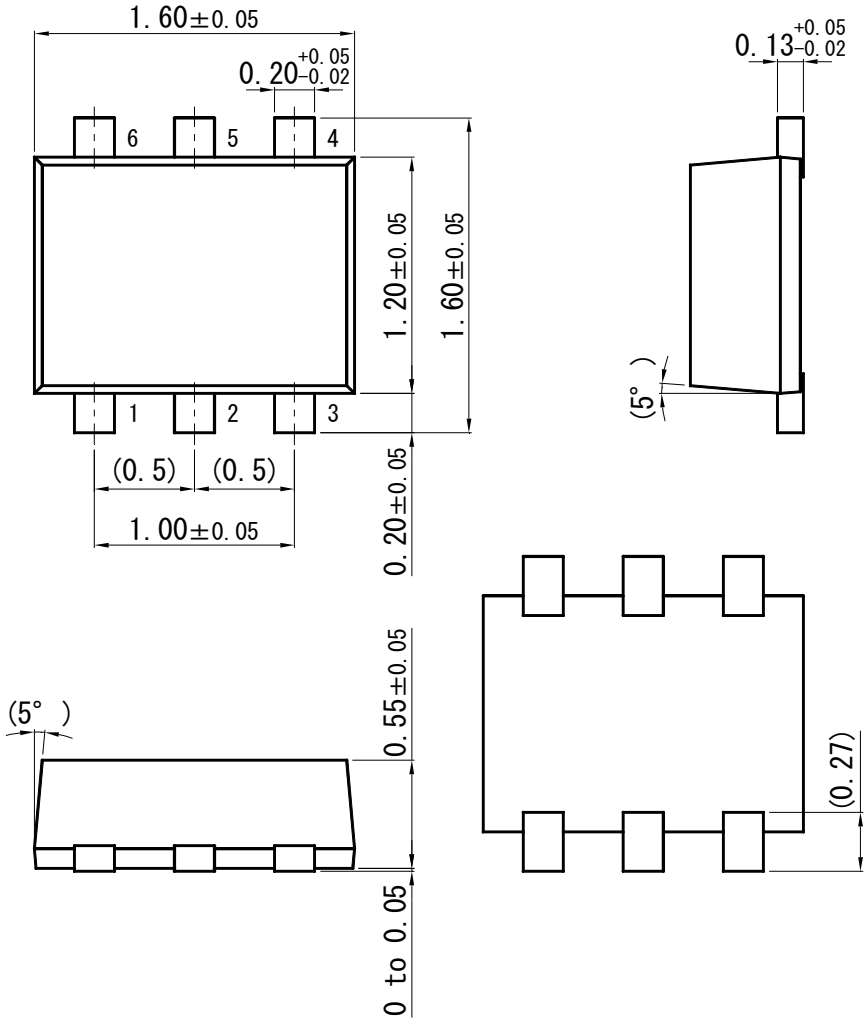
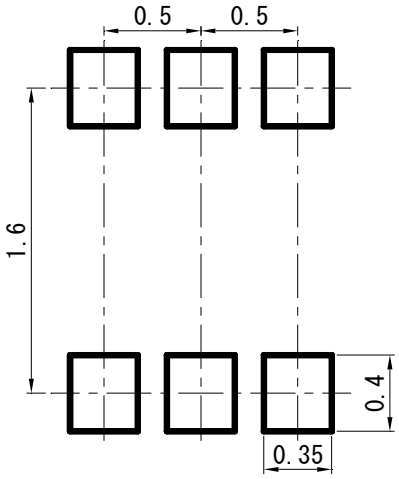
SSMini6-F3-B

Unit: mm



■ Land Pattern (Reference) (Unit : mm)



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