### Notification about the transfer of the semiconductor business

The semiconductor business of Panasonic Corporation was transferred on September 1, 2020 to Nuvoton Technology Corporation (hereinafter referred to as "Nuvoton"). Accordingly, Panasonic Semiconductor Solutions Co., Ltd. became under the umbrella of the Nuvoton Group, with the new name of Nuvoton Technology Corporation Japan (hereinafter referred to as "NTCJ").

In accordance with this transfer, semiconductor products will be handled as NTCJ-made products after September 1, 2020. However, such products will be continuously sold through Panasonic Corporation.

Publisher of this Document is NTCJ.

If you would find description "Panasonic" or "Panasonic semiconductor solutions", please replace it with NTCJ.

Except below description page
 "Request for your special attention and precautions in using the technical information and semiconductors described in this book"

Nuvoton Technology Corporation Japan

Doc No. TT4-EA-12654

Revision. 3

MOS FET

FK3906010L

## **Panasonic**

## FK3906010L

### Silicon N-channel MOSFET

For switching FK350601 in SSMini3 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: CV

Established: 2010-06-30

: 2013-08-28

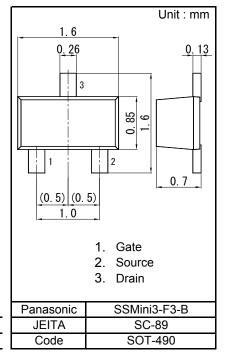
Revised

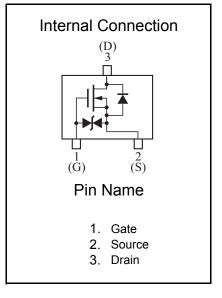
#### ■ Packaging

Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

■ Absolute Maximum Ratings Ta = 25 °C

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





MOS FET

## FK3906010L

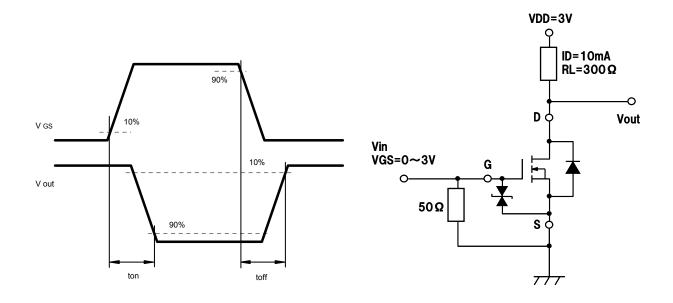
## **Panasonic**

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

Parameter	Symbol	Conditions	Min	Тур	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	μΑ
Gate-source cutoff current	IGSS	VGS = ±10 V, VDS = 0			±10	μΑ
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)	ID = 10 mA, VGS = 2.5 V		8	15	Ω
		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			12		pF
Output capacitance	Coss	VDS = 3 V, VGS = 0, f = 1 MHz		7		pF
Reverse transfer capacitance	Crss			3		pF
Turn-on time *1	ton	VDD = 3 V, VGS = 0 to 3 V,		100		
		ID = 10 mA		100		ns
Turn-off time *1	toff	VDD = 3 V, VGS = 3 to 0 V,		100		ns
		ID = 10 mA				

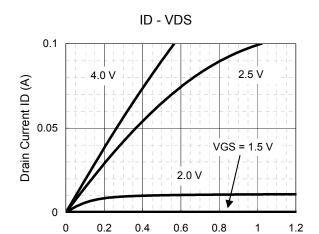
1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

2. \*1 Turn-on and Turn-off test circuit

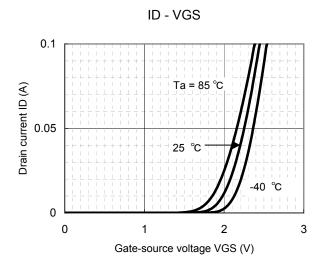


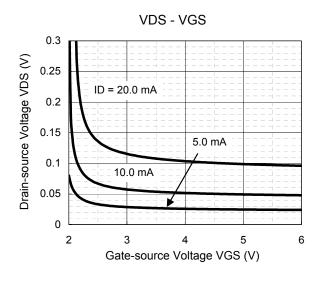
**Panasonic** 

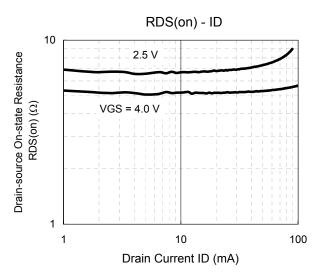
MOS FET **FK3906010L** 

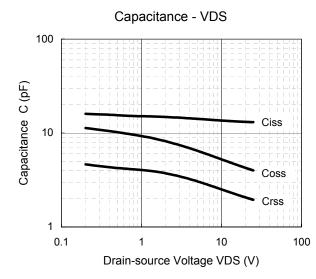


Drain-source Voltage VDS (V)





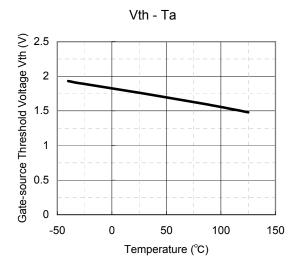


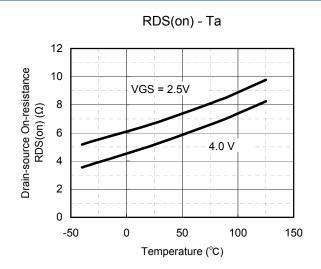


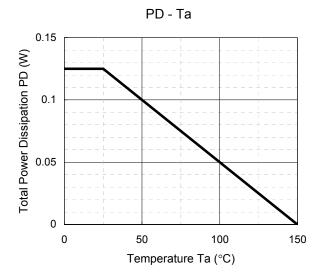
Page 3 of 5

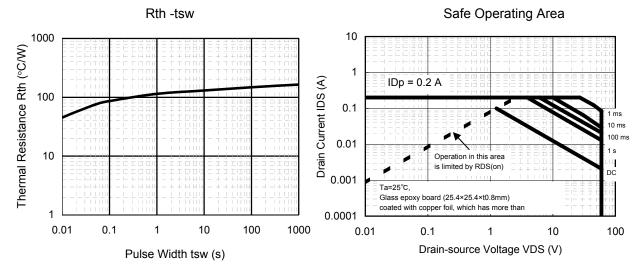
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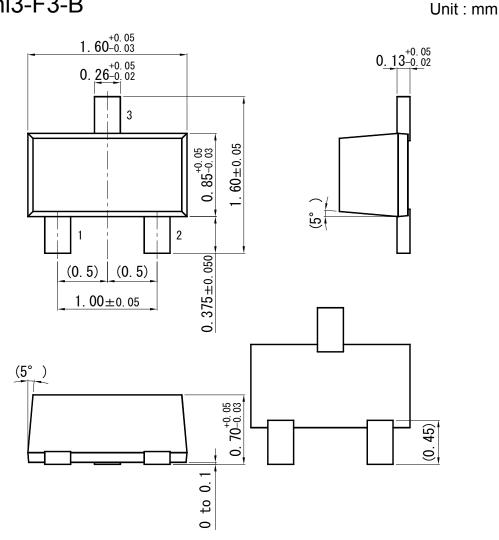
Page 4 of 5

## **Panasonic**

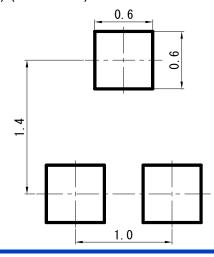
MOS FET

FK3906010L

## SSMini3-F3-B



### ■ Land Pattern (Reference) (Unit : mm)



Page 5 of 5

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