Transistors

# 2.5V Drive Pch MOS FET RTU002P02

#### Structure

Silicon P-channel MOS FET

#### Features

- 1) Low On-resistance.
- 2) Low voltage drive (2.5V drive).

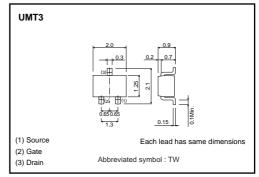
#### Applications

Switching

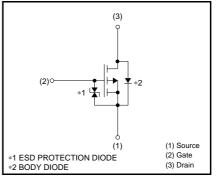
#### Package specifications

	Package	Taping		
Туре	Code	T106		
	Basic ordering unit (pieces)	3000		
RTU002P02	0			

#### •External dimensions (Unit : mm)



#### Inner circuit



#### ●Absolute maximum ratings (Ta=25°C)

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Parameter		Symbol	Limits	Unit
Drain-source voltage		VDSS	-20	V
Gate-source voltage		Vgss	±12	V
Drain ourrent	Continuous	ID	±0.25	А
Drain current	Pulsed	I <sub>DP</sub> *1	±0.5	А
Total power dissipation		P <sub>D</sub> *2	0.2	W
Channel temperature		Tch	150	°C
Range of storage temperature		Tstg	-55 to +150	°C

∗1 Pw≤10µs, Duty cycle≤1%

\*2 Each terminal mounted on a recommended land

#### Thermal resistance

Parameter	Symbol	Limits	Unit
Channel to ambient	Rth(ch-a)*	625	°C/W

\* Each terminal mounted on a recommended land

### Transistors

#### •Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions	
Gate-source leakage	lgss	-	-	±10	μA	Vgs= ±12V, Vds=0V	
Drain-source breakdown voltage	V(BR) DSS	-20	-	-	V	I <sub>D</sub> = –1mA, V <sub>GS</sub> =0V	
Zero gate voltage drain current	IDSS	-	-	-1	μΑ	$V_{DS}$ = -20V, $V_{GS}$ =0V	
Gate threshold voltage	VGS (th)	-0.7	-	-2.0	V	$V_{DS}$ = -10V, $I_{D}$ = -1mA	
Static drain-source on-state resistance	RDS (on)*	-	1.0	1.5	Ω	I <sub>D</sub> = -0.25A, V <sub>GS</sub> = -4.5V	
		-	1.1	1.6	Ω	I <sub>D</sub> = -0.25A, V <sub>GS</sub> = -4V	
		-	2.0	3.0	Ω	I <sub>D</sub> = -0.15A, V <sub>GS</sub> = -2.5V	
Forward transfer admittance	Y <sub>fs</sub> *	0.2	-	_	S	$V_{DS} = -10V, I_{D} = -0.15A$	
Input capacitance	Ciss	-	50	_	pF	VDS=-10V	
Output capacitance	Coss	-	5	_	pF	Vgs= 0V	
Reverse transfer capacitance	Crss	-	5	_	pF	f=1MHz	
Turn-on delay time	t <sub>d (on)</sub> *	-	9	-	ns	V <sub>DD</sub> ≒ –15V ID= –0.15A	
Rise time	tr *	_	6	_	ns		
Turn-off delay time	td (off) *	-	35	-	ns	VGS= -4.5V RL= 100Ω RG= 10Ω	
Fall time	t <sub>f</sub> *	_	45	_	ns		

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#### •Body diode characteristics (Source-drain) (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	Vsd	-	-	-1.2	V	Is= -0.1A, V <sub>GS</sub> =0V

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