

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).

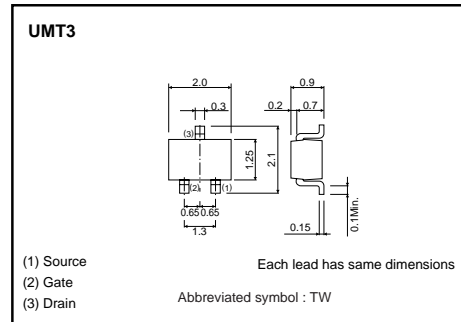
●Applications

Switching

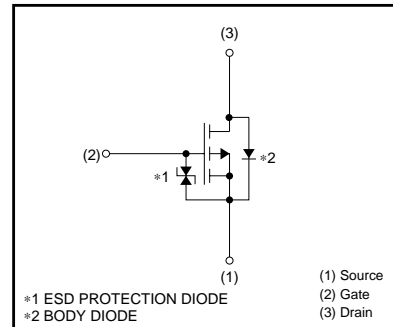
●Package specifications

Type	Package	Taping
	Code	T106
	Basic ordering unit (pieces)	3000
RTU002P02		○

●External dimensions (Unit : mm)



●Inner circuit



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Drain-source voltage	V_{DS}	-20	V
Gate-source voltage	V_{GS}	±12	V
Drain current	Continuous	±0.25	A
	Pulsed	I_{DP} *1	±0.5
Total power dissipation	P_D *2	0.2	W
Channel temperature	T_{ch}	150	°C
Range of storage temperature	T_{stg}	-55 to +150	°C

*1 $P_w \leq 10\mu s$, Duty cycle $\leq 1\%$

*2 Each terminal mounted on a recommended land

●Thermal resistance

Parameter	Symbol	Limits	Unit
Channel to ambient	$R_{th(ch-a)}$ *	625	°C/W

* Each terminal mounted on a recommended land

Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	I _{GSS}	-	-	±10	μA	V _{GS} = ±12V, V _{DS} =0V
Drain-source breakdown voltage	V _{(BR) DSS}	-20	-	-	V	I _D = -1mA, V _{GS} =0V
Zero gate voltage drain current	I _{DSS}	-	-	-1	μA	V _{DS} = -20V, V _{GS} =0V
Gate threshold voltage	V _{GS(th)}	-0.7	-	-2.0	V	V _{DS} = -10V, I _D = -1mA
Static drain-source on-state resistance	R _{DS(on)} *	-	1.0	1.5	Ω	I _D = -0.25A, V _{GS} = -4.5V
		-	1.1	1.6	Ω	I _D = -0.25A, V _{GS} = -4V
		-	2.0	3.0	Ω	I _D = -0.15A, V _{GS} = -2.5V
Forward transfer admittance	Y _{fs} *	0.2	-	-	S	V _{DS} = -10V, I _D = -0.15A
Input capacitance	C _{iss}	-	50	-	pF	V _{DS} = -10V
Output capacitance	C _{oss}	-	5	-	pF	V _{GS} = 0V
Reverse transfer capacitance	C _{rss}	-	5	-	pF	f=1MHz
Turn-on delay time	t _{d(on)} *	-	9	-	ns	V _{DD} = -15V I _D = -0.15A
Rise time	t _r *	-	6	-	ns	V _{GS} = -4.5V
Turn-off delay time	t _{d(off)} *	-	35	-	ns	R _L = 100Ω
Fall time	t _f *	-	45	-	ns	R _G = 10Ω

*Pulsed

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V _{SD}	-	-	-1.2	V	I _S = -0.1A, V _{GS} =0V

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