2.5V Drive Pch MOS FET

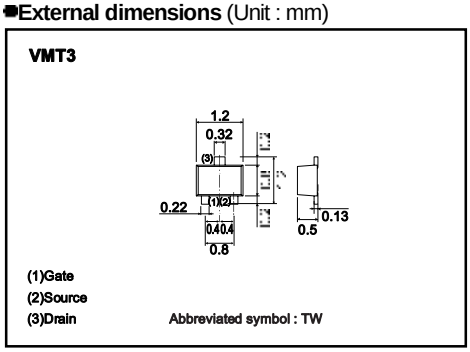
RTM002P02

●**Structure**
Silicon P-channel MOS FET

●**Features**
1) Low On-resistance.
2) Small package (VMT3).
3) 2.5V drive.

●**Applications**
Switching

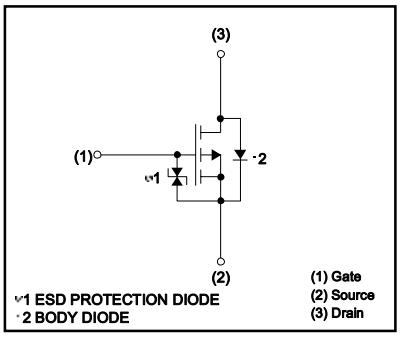
●**External dimensions** (Unit : mm)



●**Packaging specifications**

Type	Package	Taping
	Code	T2L
	Basic ordering unit (pieces)	8000
RTM002P02		○

●**Inner circuit**



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

Parameter		Symbol	Limits	Unit
Drain-source voltage		V_{DSS}	−20	V
Gate-source voltage		V_{GSS}	±12	V
Drain current	Continuous	I_D	±0.2	A
	Pulsed	I_{DP} *1	±0.4	A
Total power dissipation		P_D *2	0.15	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)*	833	°C/W

* Each terminal mounted on a recommended land

●**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= –0.2A, V_{GS}= –4.5V
		–	1.1	1.6	Ω	I_D= –0.2A, 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
Rise time	t_r*	–	6	–	ns	I_D= –0.15A
Turn-off delay time	$t_{d\,(off)}$*	–	35	–	ns	V_{GS}= –4.5V 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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