

Transistors

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.

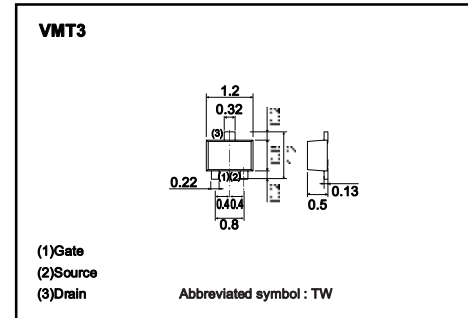
●Applications

Switching

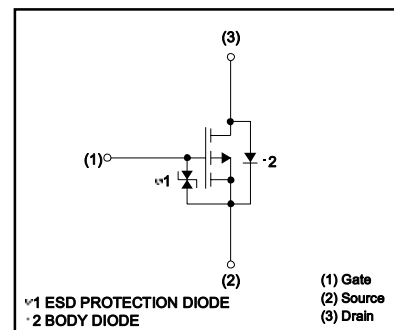
●Packaging specifications

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

●External dimensions (Unit : mm)



●Inner circuit

●Absolute maximum ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit	
Drain-source voltage	V_{DS}	-20	V	
Gate-source voltage	V_{GS}	± 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	T_{ch}	150	$^\circ\text{C}$	
Range of storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$	

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

*2 Each terminal mounted on a recommended land

●Thermal resistance

Parameter	Symbol	Limits	Unit
Channel to ambient	$R_{th(ch-a)}$ *	833	$^\circ\text{C/W}$

* Each terminal mounted on a recommended land

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●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Gate-source leakage	I_{GSS}	-	-	± 10	μA	$V_{GS} = \pm 12V, V_{DS} = 0V$
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	$V_{GS} = -4.5V$
Fall time	t_f	-	45	-	ns	$R_L = 100\Omega$ $R_G = 10\Omega$

* 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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