

2.5V Drive Nch MOS FET

RJU002N06

●Structure

Silicon N-channel MOS FET

●Features

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

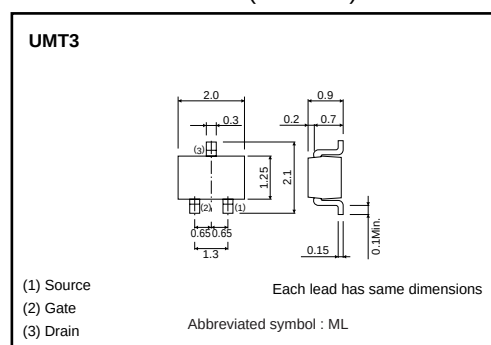
●Applications

Switching

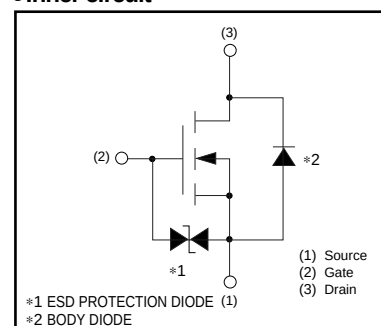
●Packaging specifications

Type	Package	Taping
	Code	T106
	Basic ordering unit (pieces)	3000
RJU002N06		○

●External dimensions (Unit : mm)



●Inner circuit



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Drain-source voltage	V_{DS}	60	V
Gate-source voltage	V_{GS}	± 12	V
Drain current	Continuous	I_D	± 200 mA
	Pulsed	I_{DP} *1	± 800 mA
Total power dissipation	P_D *2	200	mW
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	$V_{GS}=\pm 12V$, $V_{DS}=0V$
Drain-source breakdown voltage	$V_{(BR)DSS}$	60	—	—	V	$I_D=1mA$, $V_{GS}=0V$
Zero gate voltage drain current	I_{DSS}	—	—	1	μA	$V_{DS}=60V$, $V_{GS}=0V$
Gate threshold voltage	$V_{GS(th)}$	0.5	—	1.5	V	$V_{DS}=10V$, $I_D=1mA$
Static drain-source on-state resistance	$R_{DS(on)}^*$	—	1.6	2.3	Ω	$I_D=200mA$, $V_{GS}=4.5V$
		—	1.7	2.4	Ω	$I_D=200mA$, $V_{GS}=4V$
		—	2.2	3.1	Ω	$I_D=200mA$, $V_{GS}=2.5V$
Forward transfer admittance	$ Y_{fs} ^*$	0.1	—	—	S	$V_{DS}=10V$, $I_D=200mA$
Input capacitance	C_{iss}	—	18	—	pF	$V_{DS}=10V$
Output capacitance	C_{oss}	—	7	—	pF	$V_{GS}=0V$
Reverse transfer capacitance	C_{rss}	—	5	—	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}^*$	—	7	—	ns	$V_{DD} \doteq 30V$
Rise time	t_r^*	—	7	—	ns	$I_D=100mA$
Turn-off delay time	$t_{d(off)}^*$	—	12	—	ns	$V_{GS}=4V$
Fall time	t_f^*	—	90	—	ns	$R_L=300\Omega$ $R_G=10\Omega$

*Pulsed

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_{SD}	—	—	1.2	V	$I_S=0.16A$, $V_{GS}=0V$

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