

Transistors

4V Drive Nch MOS FET

RHU003N03

●Structure

Silicon N-channel MOS FET

●Features

- 1) Low On-resistance.
- 2) 4V drive.

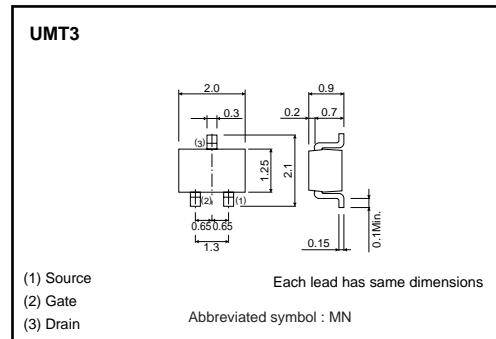
●Applications

Switching

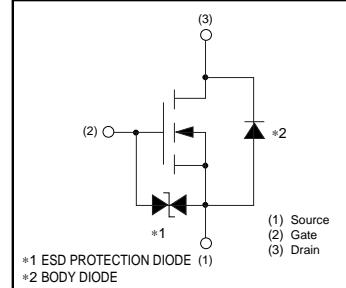
●Packaging specifications

Type	Package	Taping
	Code	T106
	Basic ordering unit (pieces)	3000
RHU003N03	○	

●External dimensions (Unit : mm)



●Inner circuit



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Drain-source voltage	V _{DSS}	30	V
Gate-source voltage	V _{GSS}	±20	V
Drain current	I _D	±300	mA
Pulsed	I _{DP} *1	±1.2	A
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≤10μs, Duty cycle≤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} =±20V, V _{DS} =0V
Drain-source breakdown voltage	V _{(BR) DSS}	30	—	—	V	I _D = 1mA, V _{GS} =0V
Zero gate voltage drain current	I _{DSS}	—	—	1	µA	V _{DS} = 30V, V _{GS} =0V
Gate threshold voltage	V _{GS (th)}	1.0	—	2.5	V	V _{DS} = 10V, I _D = 1mA
Static drain-source on-state resistance	R _{DS (on)*}	—	0.8	1.2	Ω	I _D = 300mA, V _{GS} = 10V
		—	1.2	1.9	Ω	I _D = 300mA, V _{GS} = 4.5V
		—	1.4	2.3	Ω	I _D = 300mA, V _{GS} = 4V
Forward transfer admittance	Y _{fs} *	0.2	—	—	S	V _{DS} = 10V, I _D = 300mA
Input capacitance	C _{iss}	—	20	—	pF	V _{DS} = 10V
Output capacitance	C _{oss}	—	13	—	pF	V _{GS} =0V
Reverse transfer capacitance	C _{rss}	—	4	—	pF	f=1MHz
Turn-on delay time	t _{d (on)} *	—	7	—	ns	V _{DD} = 15V I _D = 150mA
Rise time	t _r *	—	6	—	ns	V _{GS} = 10V
Turn-off delay time	t _{d (off)} *	—	9	—	ns	R _L =100Ω
Fall time	t _f *	—	40	—	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 = 0.16A, V _{GS} =0V

Appendix

Notes

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