

RHU003N03

Silicon N-channel MOS FET

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

Switching

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

Technical drawing of a 3-pin TO-18 package showing top, side, and end views with dimensions:

- Top View:**
 - Overall width: 2.0
 - Distance from left edge to center of source pin: 0.3
 - Distance between source and gate pins: 1.25
 - Distance between gate and drain pins: 1.3
 - Pin diameter: 0.65
- Side View:**
 - Overall height: 2.1
 - Distance from top edge to center of source pin: 0.2
 - Distance from top edge to center of gate pin: 0.7
 - Distance from top edge to center of drain pin: 0.9
- End View:**
 - Lead thickness: 0.15
 - Lead height: 0.1 min.

Each lead has same dimensions

Abbreviated symbol : MN

Parameter		Symbol	Limits	Unit
Drain-source voltage		V _{DSS}	30	V
Gate-source voltage		V _{GSS}	±20	V
Drain current	Continuous	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 $P_w \leq 10 \mu s$, Duty cycle $\leq 1\%$

*2 Each terminal mounted on a recommended land

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	$V_{GS}=\pm 20V$, $V_{DS}=0V$
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	$V_{DD}=15V$
Rise time	t_r *	—	6	—	ns	$I_D=150mA$
Turn-off delay time	$t_{d(off)}$ *	—	9	—	ns	$V_{GS}=10V$
Fall time	t_f *	—	40	—	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	$I_S=0.16A$, $V_{GS}=0V$

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