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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Transistors

4V Drive Nch MOS FET

RHK003N06

●Structure

Silicon N-channel MOS FET

●Features

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

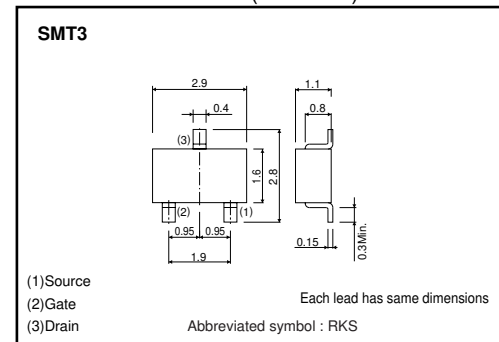
●Applications

Switching

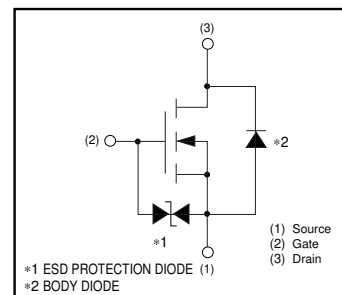
●Packaging specifications and hFE

Type	Package	Taping
	Code	T146
	Basic ordering unit (pieces)	3000
RHK003N06		○

●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}	± 20	V
Drain current	Continuous	I_D	± 300 mA
	Pulsed	I_{DP} *1	± 1.2 A
Source current (Body diode)	Continuous	I_S	200 mA
	Pulsed	I_{SP} *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	$V_{GS}=\pm 20V, V_{DS}=0V$
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	$V_{GS(th)}$	1.0	–	2.5	V	$V_{DS}=10V, I_D=1mA$
Static drain-source on-state resistance	$R_{DS(on)}$ *	–	0.7	1.0	Ω	$I_D=300mA, V_{GS}=10V$
		–	1.1	1.5	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}	–	33	–	pF	$V_{DS}=10V$
Output capacitance	C_{oss}	–	14	–	pF	$V_{GS}=0V$
Reverse transfer capacitance	C_{rss}	–	9	–	pF	$f=1MHz$
Turn-on delay time	$t_{d(on)}$ *	–	6	–	ns	$V_{DD}\doteq 30V$
Rise time	t_r *	–	5	–	ns	$I_D=150mA$
Turn-off delay time	$t_{d(off)}$ *	–	13	–	ns	$V_{GS}=10V$
Fall time	t_f *	–	80	–	ns	$R_L=200\Omega$
Total gate charge	Q_g *	–	3	6	nC	$V_{DD}\doteq 30V$
Gate-source charge	Q_{gs} *	–	0.6	–	nC	$V_{GS}=10V$
Gate-drain charge	Q_{gd} *	–	0.5	–	nC	$I_D=300mA$

*Pulsed

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_{SD} *	–	–	1.2	V	$I_S=300mA, V_{GS}=0V$

*Pulsed

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