



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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4V Drive Nch MOS FET

RHK005N03

●Structure

Silicon N-channel MOS FET

●Features

- 1) Low On-resistance.
- 2) High speed switching.

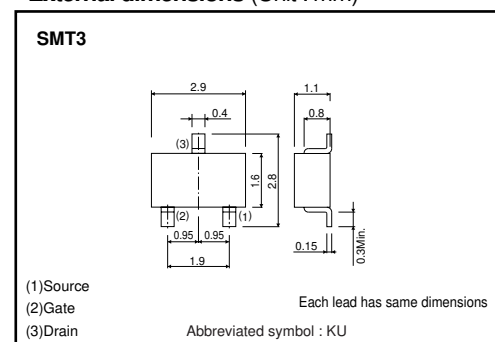
●Applications

Switching

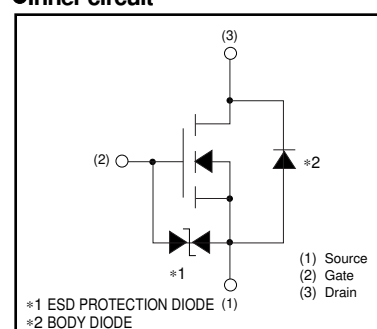
●Packaging specifications and h_{FE}

Type	Package	Taping
	Code	T146
	Basic ordering unit (pieces)	3000
RHK005N03		○

●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	Continuous	I _D	±500 mA
	Pulsed	I _{DP} *1	±2.0 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	$V_{GS} = \pm 20V, V_{DS} = 0V$
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	$R_{DS(on)}^*$	—	350	550	$m\Omega$	$I_D = 500mA, V_{GS} = 10V$
		—	510	720	$m\Omega$	$I_D = 500mA, V_{GS} = 4.5V$
		—	600	840	$m\Omega$	$I_D = 500mA, V_{GS} = 4V$
Forward transfer admittance	$ Y_{fs} ^*$	0.5	—	—	S	$V_{DS} = 10V, I_D = 500mA$
Input capacitance	C_{iss}	—	45	—	pF	$V_{DS} = 10V$
Output capacitance	C_{oss}	—	20	—	pF	$V_{GS} = 0V$
Reverse transfer capacitance	C_{rss}	—	10	—	pF	$f = 1MHz$
Turn-on delay time	$t_{d(on)}^*$	—	10	—	ns	$V_{DD} = 15V$
Rise time	t_r^*	—	10	—	ns	$I_D = 250mA$
Turn-off delay time	$t_{d(off)}^*$	—	15	—	ns	$V_{GS} = 10V$
Fall time	t_f^*	—	30	—	ns	$R_L = 60\Omega$ $R_G = 10\Omega$

*Pulsed

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

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

Notes

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