2SK2014

Silicon N-Channel Power F-MOS

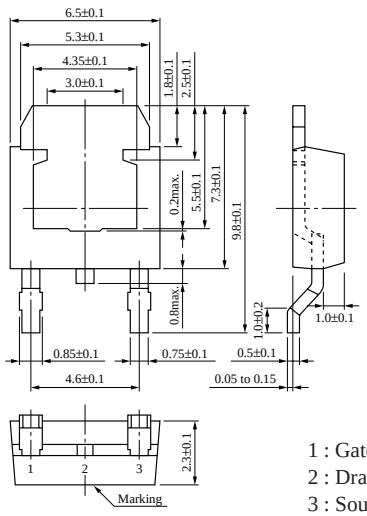
■ Features

- Low ON-resistance $R_{DS(on)}$: $R_{DS(on)}1$= 0.7Ω (typ)
- No secondary breakdown
- Low-voltage drive possible(V_{GS}= 4V)
- Taping supply possible

■ Applications

- DC-DC converter
- Non-contact relay
- Solenoid drive
- Motor drive

Unit : mm



1 : Gate
2 : Drain
3 : Source
EIAJ : SC-63
U Type Package

■ Absolute Maximum Ratings (Tc = 25˚C)

Parameter		Symbol	Rating	Unit
Drain-Source breakdown voltage		V_{DSS}	100	V
Gate-Source voltage		V_{GSS}	±20	V
Drain current	at 4V drive	I_D	±1	A
	Pulse	I_{DP}	±2	A
Allowable power dissipation	T_C= 25˚C	P_D	10	W
	Ta= 25˚C		0.75	
Channel temperature		T_{ch}	150	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

■ Electrical Characteristics (Tc = 25˚C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS}	V_{DS}= 80V, V_{GS}= 0			10	μ A
Gate-Source leakage current	I_{GSS}	V_{GS}=±15V, V_{DS}= 0			±10	μ A
Drain-Source breakdown voltage	V_{DSS}	I_D= 0.1mA, V_{GS}= 0	100			V
Gate threshold voltage	V_{th}	V_{DS}= 5V, I_D=1mA	0.8			V
Drain-Source ON-resistance	$R_{DS\ (on)}1$	V_{GS}= 4V, I_D= 0.5A		0.7	2	Ω
	$R_{DS\ (on)}2$	V_{GS}=10V, I_D= 0.5A		0.62	1	Ω
Forward transadmittance	$\|Y_{fs}\|$	V_{DS}=10V, I_D= 0.5A, f=1MHz	1		0.95	S
Input capacitance	C_{iss}	V_{DS}=10V, V_{GS}= 0, f=1MHz		188		pF
Output capacitance	C_{oss}			63		pF
Feedback capacitance	C_{rss}			14		pF
Turn-on time	t_{on}	V_{GS}=10V, I_D= 0.5A V_{DD}=10V, R_L= 20Ω		38		ns
Fall time	t_f			330		ns
Turn-off time (delay time)	$t_{d\ (off)}$			90		ns