

2SK2324(Tentative)

Silicon N-Channel Power F-MOS

■ Features

- Avalanche energy capability guaranteed
- High-speed switching
- Low ON-resistance
- No secondary breakdown

■ Applications

- Non-contact relay
- Solenoid drive
- Motor drive
- Control equipment
- Switching mode regulator

■ Absolute Maximum Ratings (T_c = 25°C)

Parameter	Symbol	Rating	Unit	
Drain-Source breakdown voltage	V _{DSS}	600	V	
Gate-Source voltage	V _{GSS}	±30	V	
Drain current	DC	I _D	±2	A
	Pulse	I _{DP}	±4	A
Avalanche energy capability	EAS*	10	mJ	
Allowable power dissipation	T _C = 25°C	P _D	2	W
	T _a = 25°C		40	
Channel temperature	T _{ch}	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	

* L= 5mH, I_L= 2A, 1 pulse

■ Electrical Characteristics (T_c = 25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit	
Drain-Source cut-off current	I _{DSS}	V _{DS} = 480V, V _{GS} = 0			100	μA	
Gate-Source leakage current	I _{GSS}	V _{GS} =± 30V, V _{DS} = 0			±1	μA	
Drain-Source breakdown voltage	V _{DSS}	I _D =1mA, V _{GS} = 0	600			V	
Gate threshold voltage	V _{th}	V _{DS} = 25V, I _D =1mA	2		5	V	
Drain-Source ON-resistance	R _{DS(on)}	V _{GS} =10V, I _D =1A		4.9	6	Ω	
Forward transadmittance	Y _{fs}	V _{DS} = 25V, I _D =1A	0.5	0.85		S	
Diode forward voltage	V _{DSF}	I _{DR} = 2A, V _{GS} = 0			-1.6	V	
Input capacitance	C _{iss}	V _{DS} = 20V, V _{GS} = 0, f=1MHz		260		pF	
Output capacitance	C _{oss}				35		pF
Feedback capacitance	C _{rss}				10		pF
Turn-on time (delay time)	t _{d(on)}	V _{DD} = 200V, I _D =1A V _{GS} =10V, R _L = 200Ω		15		ns	
Rise time	t _r			25		ns	
Fall time	t _f			35		ns	
Turn-off time (delay time)	t _{d(off)}			35		ns	
Channel-Case heat resistance	R _{th(ch-c)}				3.125	°C/W	
Channel-Atmosphere heat resistance	R _{th(ch-a)}				62.5	°C/W	

