2SK2323(Tentative)

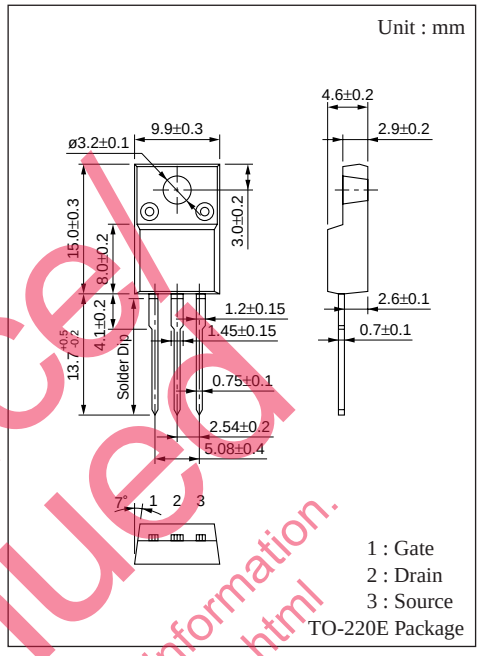
Silicon N-Channel Power F-MOS

■ 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 (Tc = 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	±1	A
	Pulse	I_{DP}	±2	A
Avalanche energy capability		EAS *	2.5	mJ
Allowable power dissipation	T_C= 25˚C	P_D	40	W
	Ta= 25˚C		2	
Channel temperature		T_{ch}	150	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

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

■ Electrical Characteristics (Tc = 25˚C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS}	V_{DS}= 480V, V_{GS}= 0			100	μ A
Gate-Source leakage current	I_{GSS}	V_{GS}= ±30V, V_{DS}= 0			±1	μ A
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= 0.5A		5.8	8.5	Ω
Forward transadmittance	| Y_{fs} |	V_{DS}= 25V, I_D= 0.5A	0.32	0.54		S
Diode forward voltage	V_{DSF}	I_{DR}=1A, V_{GS}= 0			–1.5	V
Input capacitance	C_{iss}	V_{DS}= 20V, V_{GS}= 0, f=1MHz		280		pF
Output capacitance	C_{oss}			30		pF
Feedback capacitance	C_{rss}			10		pF
Turn-on time (delay time)	$t_{d(on)}$	V_{DD}= 200V, I_D= 0.5A V_{GS}=10V, R_L=400Ω		10		ns
Rise time	t_r			10		ns
Fall time	t_f			50		ns
Turn-off time (delay time)	$t_{d(off)}$			50		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

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