

2SK2326

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

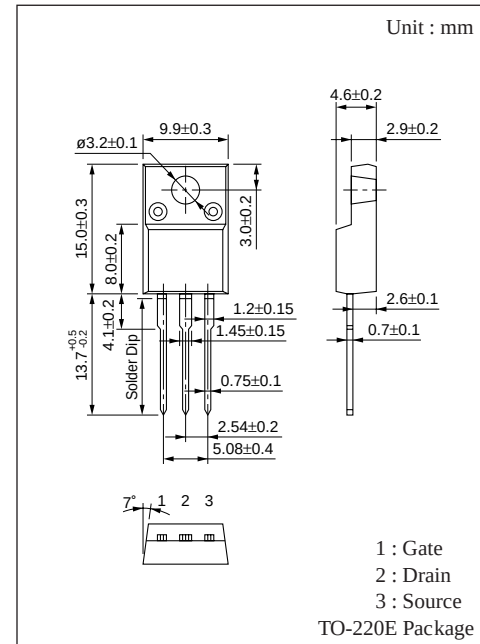
■ Absolute Maximum Ratings (T_c = 25°C)

Parameter		Symbol	Rating	Unit
Drain-Source breakdown voltage		V _{DSS}	600	V
Gate-Source voltage		V _{GSS}	±30	V
Drain current	DC	I _D	±5	A
	Pulse	I _{DP}	±10	A
Avalanche energy capability		EAS *	62.5	mJ
Allowable power dissipation	T _C = 25°C	P _D	50	W
	Ta= 25°C		2	
Channel temperature		T _{ch}	150	°C
Storage temperature		T _{stg}	−55 to +150	°C

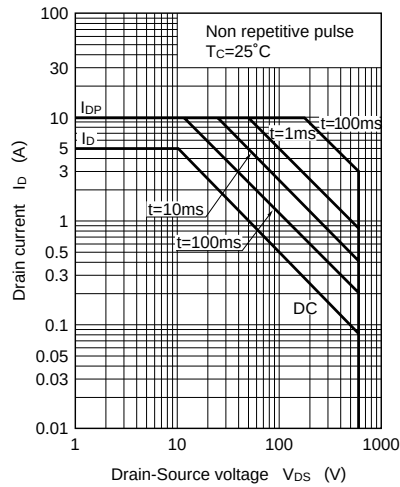
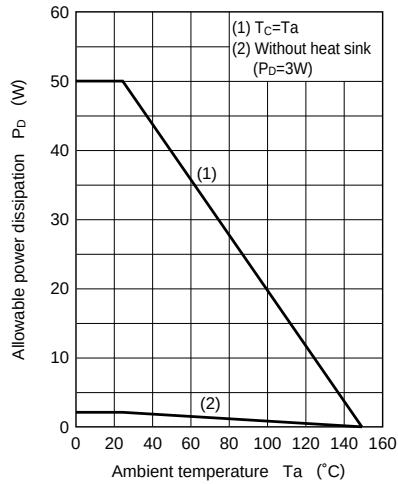
* L = 5mH, I_L = 5A, 1 pulse

■ Electrical Characteristics (T_c = 25°C)

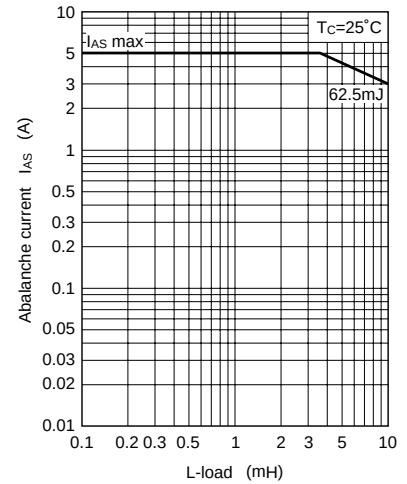
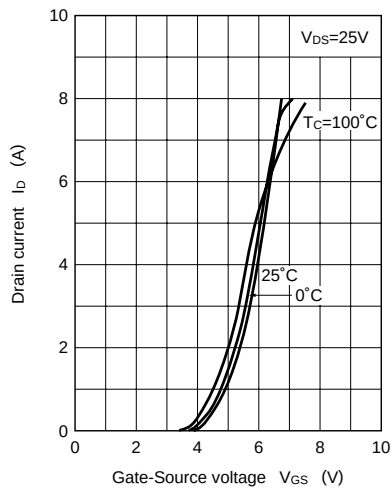
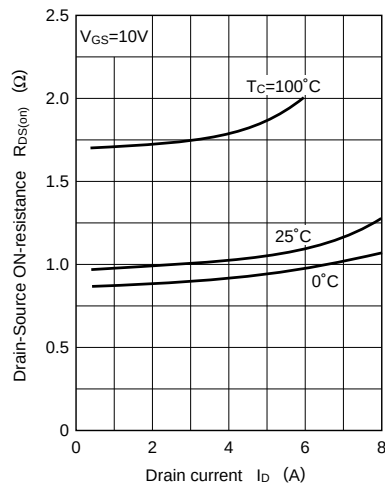
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I _{DSS}	V _{DS} = 480V, V _{GS} = 0			100	μA
Gate-Source leakage current	I _{GSS}	V _{GS} = ±30V, V _{DS} = 0			±1	μA
Drain-Source breakdown voltage	V _{DSS}	I _D = 1mA, V _{GS} = 0	600			V
Gate threshold voltage	V _{th}	V _{DS} = 25V, I _D = 1mA	2		5	V
Drain-Source ON-resistance	R _{DS(on)}	V _{GS} = 10V, I _D = 3A		1.0	1.5	Ω
Forward transadmittance	Y _{fs}	V _{DS} = 25V, I _D = 3A	1.7	2.8		S
Diode forward voltage	V _{DSF}	I _{DR} = 5A, V _{GS} = 0			-1.6	V
Input capacitance	C _{iss}	V _{DS} = 20V, V _{GS} = 0, f = 1MHz		1300		pF
Output capacitance	C _{oss}			130		pF
Feedback capacitance	C _{rss}			40		pF
Turn-on time (delay time)	t _{d(on)}	V _{DD} = 200V, I _D = 3A V _{GS} = 10V, R _L = 66.6Ω		20		ns
Rise time	t _r			35		ns
Fall time	t _f			50		ns
Turn-off time (delay time)	t _{d(off)}			150		ns
Channel-Case heat resistance	R _{th(ch-c)}				2.5	°C/W
Channel-Atmosphere heat resistance	R _{th(ch-a)}				62.5	°C/W



Area of safe operation (ASO)

 $P_D - T_a$ 

IAS – L-load

 $I_D - V_{GS}$  $R_{DS(on)} - I_D$  $|Y_{fs}| - I_D$ 