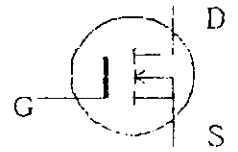


Fuji power MOSFET Specification

2SK962

1. Scope
This specifies Fuji power MOSFET 2SK962

2. Outline
I) Construction N-channel enhancement mode power MOSFET
II) Application for switching
III) Outview TO-3P (MK5C20145)



3. Absolute maximum ratings at $T_c=25^\circ\text{C}$ (unless otherwise specified)

Description	Symbol	Characteristics	Unit	Remarks
Drain-source voltage	V_{DS}	900	V	
Drain-gate voltage	V_{DGR}	900	V	$R_{GS} = 20\text{K}\Omega$
Continuous Drain current	I_D	8	A	
Pulsed drain current	I_{Dpulse}	23	A	
Gate-source voltage	V_{GS}	± 30	V	
Maximum power dissipation	P_D	150	W	
Operating and storage temperature range	T_j T_{stg}	150 -55 ~ +150	$^\circ\text{C}$ $^\circ\text{C}$	

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4. Electrical characteristics at $T_c=25^\circ\text{C}$ (unless otherwise specified)
Static ratings

Description	Symbol	Conditions	Characteristics			Unit
			Min.	Typ.	Max.	
Drain-source breakdown voltage	BV_{DSS}	$I_D = 1\text{mA}$ $V_{GS} = 0\text{V}$	900			V
Gate threshold voltage	$V_{GS(th)}$	$I_D = 1\text{mA}$ $V_{DS} = V_{GS}$	2.5	3.5	5.0	V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 900\text{V}$ $V_{GS} = 0\text{V}$		10	500	μA
	I_{DSS}			0.2	1.0	mA
Gate-source leakage current	I_{GSS}	$V_{GS} = \pm 30\text{V}$ $V_{DS} = 0\text{V}$		10	100	nA
Drain-source on-state resistance	$R_{DS(on)}$	$I_D = 4\text{A}$ $V_{GS} = 10\text{V}$		1.48	2.0	Ω

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DRAWN Aug. 25 '88	T. Araki		
CHECKED Aug. 25 '88	S. Furuhata		DWG. NO. MT5F0813

Dynamic ratings

Description	Symbol	Conditions	Characteristics			Unit
			Min.	Typ.	Max.	
Forward transconductance	g_{fs}	$I_D = 4 A$ $V_{DS} = 25 V$	3.0	6.0		S
Input capacitance	C_{iss}	$V_{DS} = 25 V$ $V_{GS} = 0 V$ $f = 1 MHz$		1400	2100	pF
Output capacitance	C_{oss}			200	300	pF
Reverse transfer capacitance	C_{rss}			110	160	pF
Turn-on time	$t_{d(on)}$	$V_{CC} = 600V$ $V_{GS} = 10 V$ $I_D = 8 A$ $R_{GS} = 25\Omega$		50	75	ns
	t_r			230	350	ns
Turn-off time	$t_{d(off)}$			300	450	ns
	t_f			160	240	ns

Reverse diode

Description	Symbol	Conditions	Characteristics			Unit
			Min.	Typ.	Max.	
Continuous reverse drain current	I_{DR}	$T_c = 25^\circ C$			8	A
Pulsed reverse drain current	I_{DRM}	$T_c = 25^\circ C$			23	A
Diode forward on-voltage	V_{SD}	$I_F = 2 \times I_{DR}$ $V_{GS} = 0 V, T_j = 25^\circ C$		1.0	1.5	V
Reverse recovery time	t_{rr}	$I_F = I_{DR}$ $dI_F/dt = 100A/\mu S$ $T_j = 25^\circ C$		1000		ns
Reverse recovery charge	Q_{rr}				10	μC

5. Thermal resistance

Description	Symbol	Conditions	Characteristics			Unit
			Min.	Typ.	Max.	
Thermal resistance	$R_{th j-c}$				0.83	$^\circ C/W$
	$R_{th j-a}$				35.0	$^\circ C/W$

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