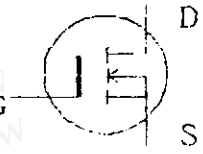
Fuji power MOSFET Specification

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 Tc=25 ℃ (unless otherwise specified)

Desctiption	Symbol	Characteristics	Unit	Remarks
Drain-source voltage	V_{DS}	900	V	
Drain-gate voltage	V_{DGR}	900	V	R_{GS}=20KΩ
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	150	℃	
	T_{stg}	-55 ~ +150	℃	

4. Electrical characteristics at Tc=25℃ (unless otherwise specified)
Static ratings

Description	Symbol	Conditions		Characteristics Min.	Typ.	Max.	Unit
Drain-source breakdown voltage	BV_{DSS}	I_D=1 mA, V_{GS}=0 V		900			V
Gate threshold voltage	$V_{GS(th)}$	I_D=1 mA, $V_{DS}=V_{GS}$		2.5	3.5	5.0	V
Zero gate voltage drain current	I_{DSS}	V_{DS}=900 V, V_{GS}=0 V	Tj= 25℃		10	500	μA
	I_{DSS}		Tj=125℃		0.2	1.0	mA
Gate-source leakage current	I_{GSS}	$V_{GS}=\pm 30$ V, V_{DS}= 0 V			10	100	nA
Drain-source on-state resistance	$R_{DS(on)}$	I_D = 4 A, V_{GS}=10 V			1.48	2.0	Ω

	DATE	NAME	APPROVED
DRAWN	Aug.-25-'88	T. Arai	
CHECKED	Aug.-25-'88	S. Furuhata	Y. Asakawa

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Dynamic ratings

Description	Symbol	Conditions	Characteristics Min.	Typ.	Max.	Unit
Forward transconductance	gfs	I_D = 4 A, V_{DS} = 25 V	3.0	6.0		S
Input capacitance	Ciss	V_{DS} = 25 V, V_{GS} = 0 V, f = 1MHz		1400	2100	pF
Output capacitance	Coss			200	300	pF
Reverse transfer capacitance	Crss			110	160	pF
Turn-on time	td(on)	V_{CC} = 600V, V_{GS} = 10 V, I_D = 8 A, R_{GS} = 25Ω		50	75	ns
	tr			230	350	ns
Turn-off time	td(off)			300	450	ns
	tf			160	240	ns

Reverse diode

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

5. Thermal resistance

Description	Symbol	Conditions	Characteristics Min.	Typ.	Max.	Unit
Thermal resistance	Rth j-c				0.83	℃/W
	Rth j-a				35.0	℃/W

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