

Fuji Power MOSFET SuperFAP-G series Target Specification

PRELIMINARY

2SK3550-01R (900V/1.4Ω/10A)

1) Package

TO-3PF

2) Absolute Maximum Ratings (Tc=25°C unless otherwise specified)

Items	Symbols	Ratings	Units
Drain-Source Voltage	V _{DS}	900	V
Continuous Drain Current	I _D	±10	A
Pulsed Drain Current	I _{D(pulse)}	±40	A
Gate-Source Voltage	V _{GS}	±30	V
Repetitive and Non-Repetitive Maximum Avalanche Current	I _{AR}	10	A
Non-Repetitive Maximum Avalanche Energy	E _{AS}	330	mJ ^{*1}
Maximum Drain-Source dV/dt	dV _{DS} /dt	20	kV/μs
Peak Diode recovery dV/dt	dV/dt	5	kV/μs ^{*2}
Maximum Power Dissipation	P _D @Tc=25°C	130	W
	P _D @Ta=25°C	3.13	W
Operating and Storage Temperature	T _{ch}	150	°C
Temperature range	T _{stg}	-55 ~ +150	°C

3)Electrical Characteristics (Tch=25°C unless otherwise specified)

Items	Symbols	Test Conditions	min.	typ.	max.	Units
Drain-Source Breakdown Voltage	BV _{DSS}	I _D =250μA V _{GS} =0V	900	---	---	V
Gate Threshold Voltage	V _{GS(th)}	I _D =250μA V _{DS} =V _{GS}	3.0	---	5.0	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =900V T _{ch} =25°C	---	---	25	μA
		V _{GS} =0V T _{ch} =125°C	---	---	250	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±30V V _{DS} =0V	---	---	100	nA
Drain-Source On-State Resistance	R _{DS(on)}	I _D =5A V _{GS} =10V	---	---	1.4	Ω
Input Capacitance	C _{iss}	V _{DS} =25V	---	1350	---	pF
Output Capacitance	C _{oss}	V _{GS} =0V	---	150	---	
Reverse Transfer Capacitance	C _{rss}	f=1MHz	---	7.5	---	
Total Gate Charge	Q _g	V _{cc} =450V	---	37	---	nC
Gate to Source Charge	Q _{gs}	I _D =10A	---	12	---	
Gate to Drain (Miller) Charge	Q _{gd}	V _{GS} =10V	---	10	---	
Avalanche Capability	I _{AV}	L=6.06mH Tch=25°C	10	---	---	A
Diode Forward On-Voltage	V _{SD}	I _F =10A, V _{GS} =0V, Tch=25°	---	1.0	1.5	V

4) Thermal Characteristics

Items	Symbols	Test Conditions	min.	typ.	max.	Units
Channel to Case	R _{th(ch-c)}				0.962	°C/W
Channel to Ambient	R _{th(ch-a)}				40.0	°C/W

*1 L=6.06mH, V_{cc}=90V*2 I_F≤-I_D, -di/dt=50A/μs, V_{cc}≤BV_{DSS}, Tch≤150°C

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a: Absolute max rating: PD was revised.

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