

## 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 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 <sub>DS</sub> /dt	20	kV/us
Peak Diode recovery dV/dt	dV/dt	5	kV/us *2
Maximum Power Dissipation	$P_D @ T_c=25$	130	W
	$P_D @ T_a=25$	3.13	W
Operating and Storage Temperature range	$T_{ch}$	150	
	$T_{stg}$	-55 ~ +150	

**3) Electrical Characteristics (Tch=25 unless otherwise specified)**

Items	Symbols	Test Conditions	min.	typ.	max.	Units
Drain-Source Breakdown Voltage	$BV_{DSS}$	$I_D=250\mu A$ $V_{GS}=0V$	900	---	---	V
Gate Threshold Voltage	$V_{GS(th)}$	$I_D=250\mu A$ $V_{DS}=V_{GS}$	3.0	---	5.0	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=900V$ $T_{ch}=25$	---	---	25	μA
		$V_{GS}=0V$ $T_{ch}=125$	---	---	250	μA
Gate-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 30V$ $V_{DS}=0V$	---	---	100	nA
Drain-Source On-State Resistance	$R_{DS(on)}$	$I_D=5A$ $V_{GS}=10V$	---	---	1.4	
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	$I_{AV}$	$L=6.06mH$ $T_{ch}=25$	10	---	---	A
Diode Forward On-Voltage	$V_{SD}$	$I_F=10A, V_{GS}=0V, T_{ch}=25$	---	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	/W
Channel to Ambient	$R_{th(ch-a)}$				40.0	/W

\*1  $L=6.06mH, V_{CC}=90V$ \*2  $I_F \leq -I_D, -di/dt=50A/\mu s, V_{CC} \leq BV_{DSS}, T_{ch} \leq 150^\circ C$ 

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a: Absolute max rating: PD was revised.

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