2SK1941-01R

FAP-IIA Series

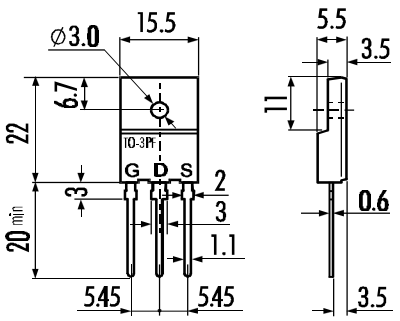
N-channel MOS-FET			
600V	0,55Ω	16A	100W

> Features

- High Speed Switching
- Low On-Resistance
- No Secondary Breakdown
- Low Driving Power
- High Voltage
- VGS = ± 30V Guarantee
- Avalanche Proof

> Outline Drawing

TO-3PF



> Applications

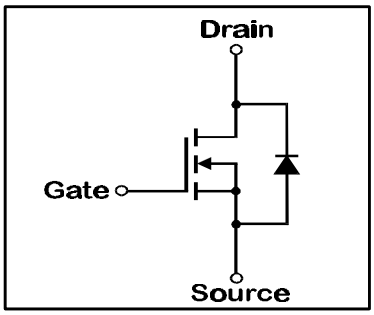
- Switching Regulators
- UPS
- DC-DC converters
- General Purpose Power Amplifier

> Maximum Ratings and Characteristics

- Absolute Maximum Ratings (T_C=25°C), unless otherwise specified

Item	Symbol	Rating	Unit
Drain-Source-Voltage	V_{DS}	600	V
Drain-Gate-Voltage (R_{GS}=20KΩ)	V_{DGR}	600	V
Continous Drain Current	I_D	16	A
Pulsed Drain Current	$I_{D(puls)}$	64	A
Gate-Source-Voltage	V_{GS}	±30	V
Max. Power Dissipation	P_D	100	W
Operating and Storage Temperature Range	T_{ch}	150	°C
	T_{stg}	-55 ~ +150	°C

> Equivalent Circuit



- Electrical Characteristics (T_C=25°C), unless otherwise specified

Item	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown-Voltage	$V_{(BR)DSS}$	I_D=1mA V_{GS}=0V	600			V
Gate Threshhold Voltage	$V_{GS(th)}$	I_D=1mA V_{DS}=V_{GS}	2,5	3,0	3,5	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=600V T_{ch}=25°C		10	500	µA
		V_{GS}=0V T_{ch}=125°C		0,2	1,0	mA
Gate Source Leakage Current	I_{GSS}	V_{GS}=±30V V_{DS}=0V		10	100	nA
Drain Source On-State Resistance	$R_{DS(on)}$	I_D=8A V_{GS}=10V		0,37	0,55	Ω
Forward Transconductance	g_{fs}	I_D=8A V_{DS}=25V	9	18		S
Input Capacitance	C_{iss}	V_{DS}=25V		3300	4950	pF
Output Capacitance	C_{oss}	V_{GS}=0V		310	470	pF
Reverse Transfer Capacitance	C_{rss}	f=1MHz		70	110	pF
Turn-On-Time t_{on} (t_{on}=$t_{d(on)}$+t_r)	$t_{d(on)}$	V_{CC}=300V		35	55	ns
	t_r	I_D=8A		70	110	ns
Turn-Off-Time t_{off} (t_{on}=$t_{d(off)}$+t_f)	$t_{d(off)}$	V_{GS}=10V		180	270	ns
	t_f	R_{GS}=10 Ω		100	150	ns
Avalanche Capability	I_{AV}	L = 100µH T_{ch}=25°C	16			A
Continous Reverse Drain Current	I_{DR}				16	A
Pulsed Reverse Drain Current	I_{DRM}				64	A
Diode Forward On-Voltage	V_{SD}	I_F=2xI_{DR} V_{GS}=0V T_{ch}=25°C		1,0	1,5	V
Reverse Recovery Time	t_{rr}	I_F=I_{DR} V_{GS}=0V		500		ns
Reverse Recovery Charge	Q_{rr}	-dI_F/dt=100A/µs T_{ch}=25°C		4,0		µC

- Thermal Characteristics

Item	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Thermal Resistance	$R_{th(ch-a)}$	channel to air			30	°C/W
	$R_{th(ch-c)}$	channel to case			1,25	°C/W

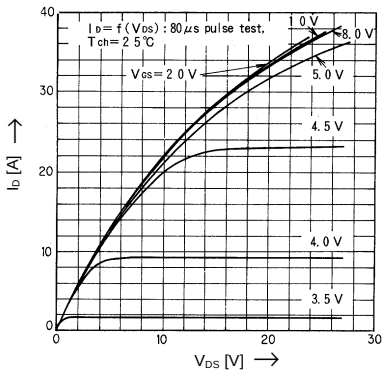
N-channel MOS-FET			
600V	0,55Ω	16A	100W

2SK1941-01R
FAP-IIA Series

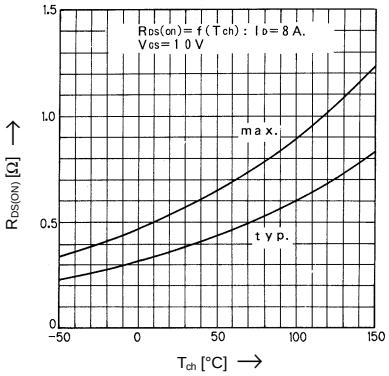
FUJI ELECTRIC

> Characteristics

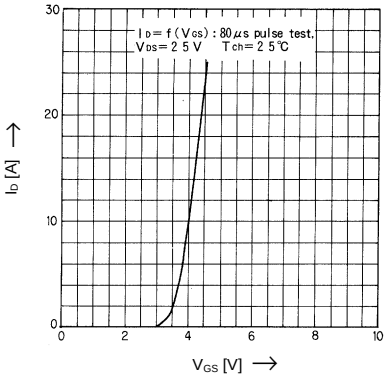
Typical Output Characteristics



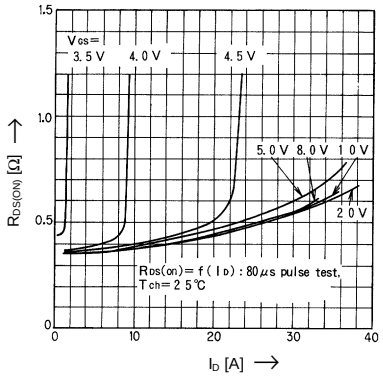
Drain-Source-On-State Resistance vs. T_{ch}



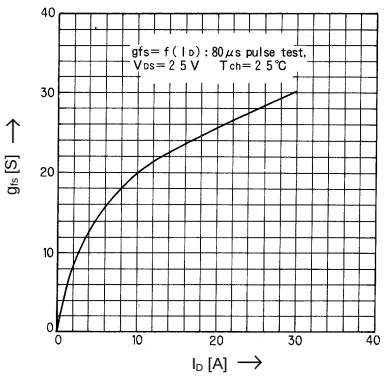
Typical Transfer Characteristics



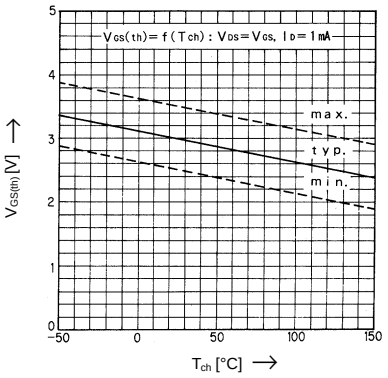
Typical Drain-Source-On-State-Resistance vs. I_D



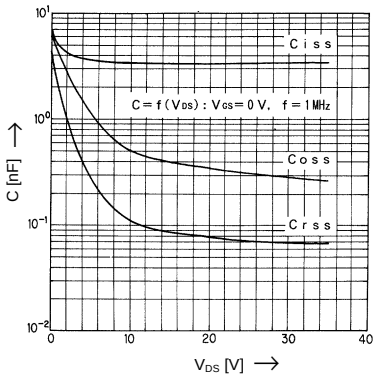
Typical Forward Transconductance vs. I_D



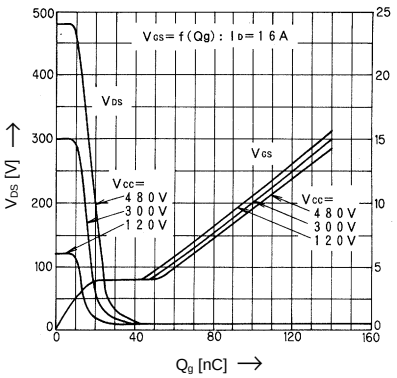
Gate Threshold Voltage vs. T_{ch}



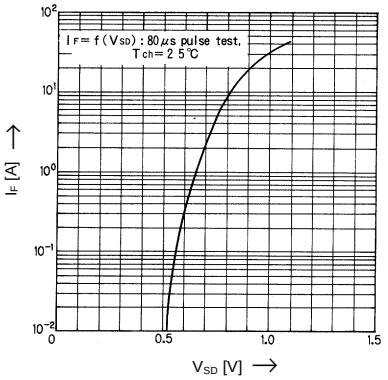
Typical Capacitance vs. V_{DS}



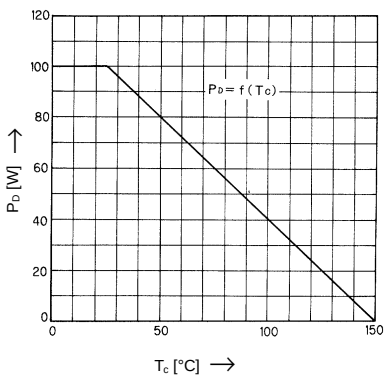
Typical Input Charge



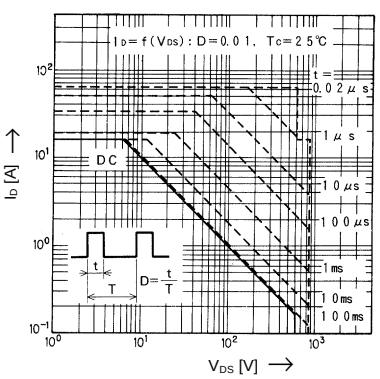
Forward Characteristics of Reverse Diode



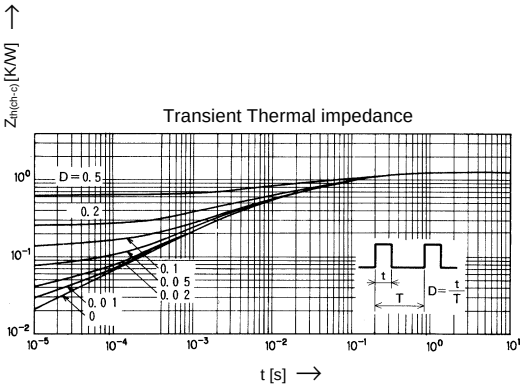
Allowable Power Dissipation vs. T_C



Safe operation area



Transient Thermal impedance



littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.