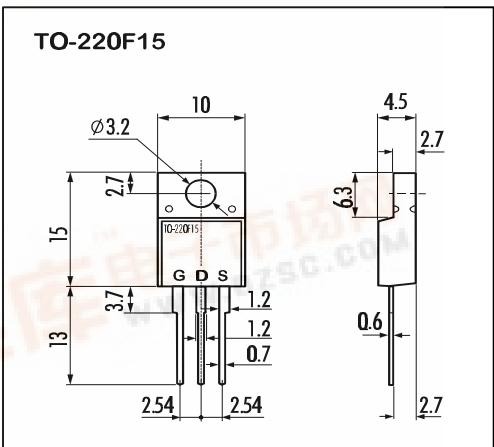


> Features

- High Current
- Low On-Resistance
- No Secondary Breakdown
- Low Driving Power
- Avalanche Rated

> Outline Drawing



> Applications

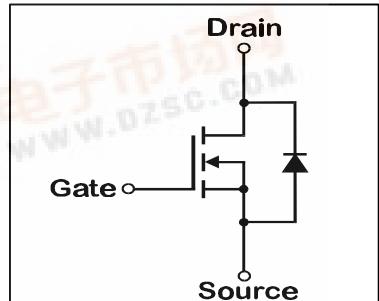
- Motor Control
- General Purpose Power Amplifier
- DC-DC converters

> Maximum Ratings and Characteristics

- Absolute Maximum Ratings ($T_C=25^\circ\text{C}$), unless otherwise specified

Item	Symbol	Rating	Unit
Drain-Source-Voltage	V_{DS}	60	V
Continous Drain Current	I_D	± 45	A
Pulsed Drain Current	$I_{D(\text{puls})}$	± 185	A
Gate-Source-Voltage	V_{GS}	± 20	V
Maximum Avalanche Energy	E_{AV}	461.9	mJ*
Max. Power Dissipation	P_D	40	W
Operating and Storage Temperature Range	T_{ch}	150	$^\circ\text{C}$
	T_{sta}	-55 ~ +150	$^\circ\text{C}$

L=0.304mH, Vcc=24V



- Electrical Characteristics ($T_C=25^\circ\text{C}$), unless otherwise specified

Item	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown-Voltage	BV_{DSS}	$I_D=1\text{mA}$ $V_{GS}=0\text{V}$	60			V
Gate Threshold Voltage	$V_{GS(\text{th})}$	$I_D=1\text{mA}$ $V_{DS}-V_{GS}$	1,0	1,5	2,0	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60\text{V}$ $T_{ch}=25^\circ\text{C}$ $V_{GS}=0\text{V}$ $T_{ch}=125^\circ\text{C}$		10	500	μA
Gate Source Leakage Current	I_{GSS}	$V_{GS}=\pm 20\text{V}$ $V_{DS}=0\text{V}$		10	100	nA
Drain Source On-State Resistance	$R_{DS(on)}$	$I_D=22,5\text{A}$ $V_{GS}=4\text{V}$		15	20	$\text{m}\Omega$
		$I_D=22,5\text{A}$ $V_{GS}=10\text{V}$		10	12	$\text{m}\Omega$
Forward Transconductance	g_{fs}	$I_D=22,5\text{A}$ $V_{DS}=25\text{V}$	15	35		S
Input Capacitance	C_{iss}	$V_{DS}=25\text{V}$		2900	4350	pF
Output Capacitance	C_{oss}	$V_{GS}=0\text{V}$		930	1400	pF
Reverse Transfer Capacitance	C_{rss}	$f=1\text{MHz}$		260	390	pF
Turn-On-Time t_{on} ($t_{on}=t_{d(on)}+t_r$)	$t_{d(on)}$	$V_{CC}=30\text{V}$		13	30	ns
	t_r	$V_{GS}=10\text{V}$		35	50	ns
Turn-Off-Time t_{off} ($t_{off}=t_{d(off)}+t_f$)	$t_{d(off)}$	$I_D=45\text{A}$		190	290	ns
	t_f	$R_{GS}=10\text{ }\Omega$		75	140	ns
Avalanche Capability	I_{AV}	$L=100\mu\text{H}$ $T_{ch}=25^\circ\text{C}$	45			A
Diode Forward On-Voltage	V_{SD}	$I_F=45\text{A}$ $V_{GS}=0\text{V}$ $T_{ch}=25^\circ\text{C}$		0,95	1,43	V
Reverse Recovery Time	t_{rr}	$I_F=45\text{A}$ $V_{GS}=0\text{V}$		55		ns
Reverse Recovery Charge	Q_{rr}	$-di/dt=100\text{A}/\mu\text{s}$ $T_{ch}=25^\circ\text{C}$		0,10		μC

- Thermal Characteristics

Item	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance	$R_{th(ch-c)}$	channel to case		3,125	$^\circ\text{C/W}$
	$R_{th(ch-a)}$	channel to ambient		62,5	$^\circ\text{C/W}$

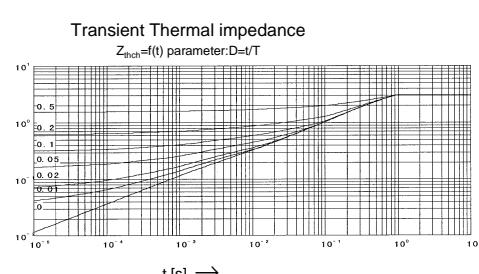
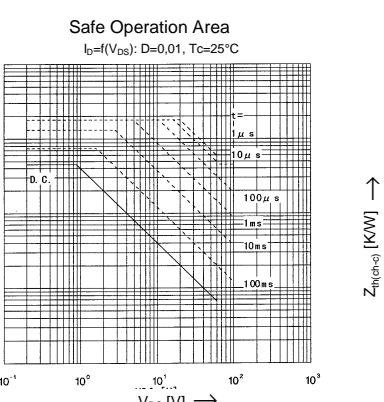
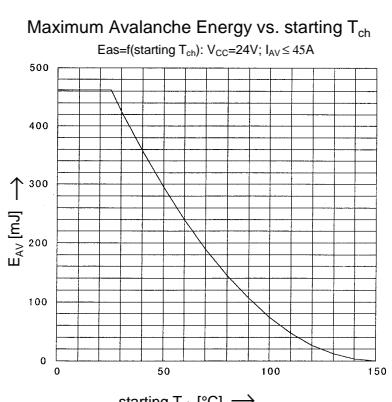
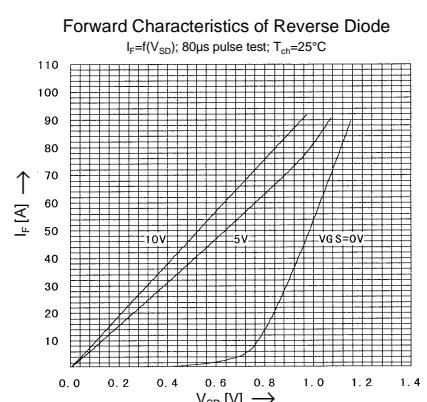
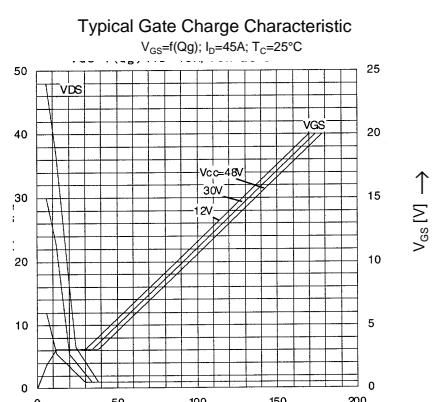
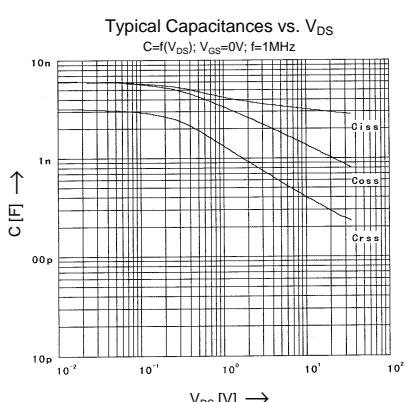
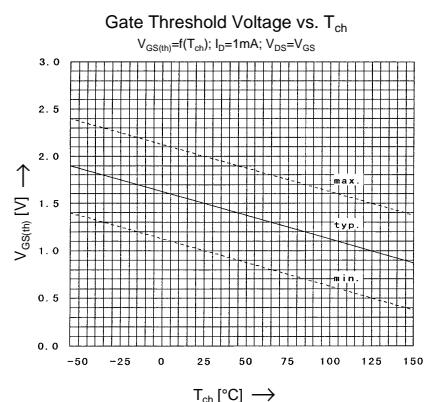
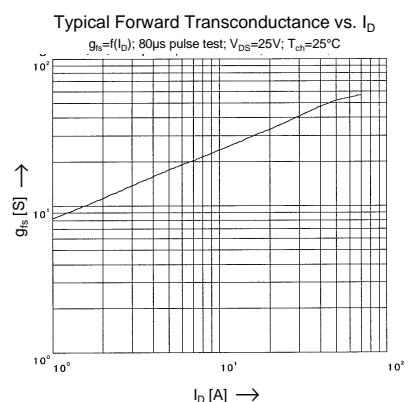
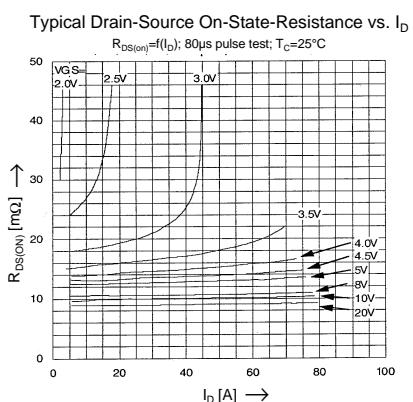
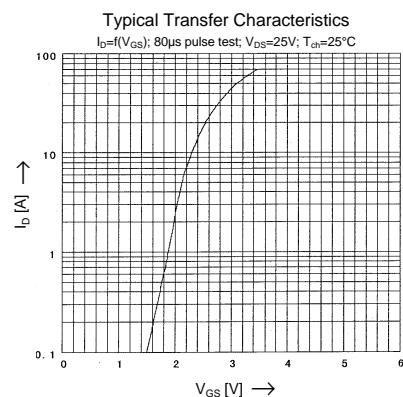
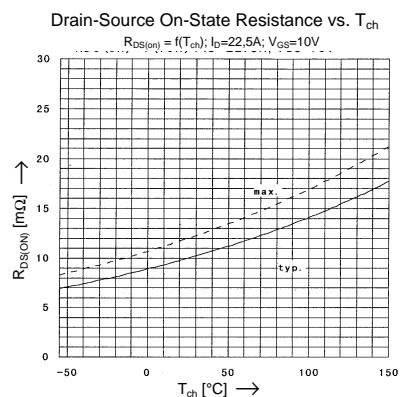
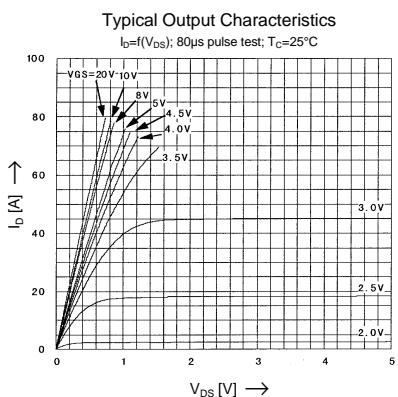
N-channel MOS-FET			
60V	0,02Ω	±45A	40W

2SK2897-01

FAP-IIIB Series

FUJI
ELECTRIC

> Characteristics



N-channel MOS-FET

60V 0,02Ω ±45A 40W

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