

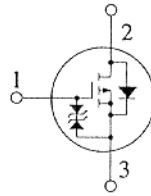
2SJ222

SILICON P-CHANNEL MOS FET

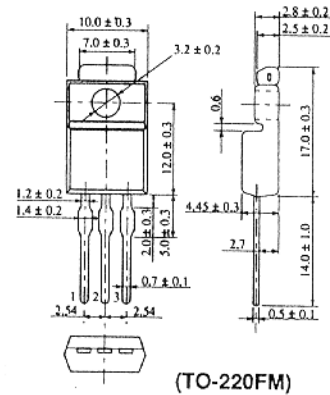
HIGH SPEED POWER SWITCHING

FEATURES

- Low On-Resistance
- High Speed Switching
- Low Drive Current
- 4 V Gate Drive Device
 - Can be driven from 5V source
- Suitable for Motor Drive, DC-DC Converter, Power Switch and Solenoid Drive



1. Gate
2. Drain
3. Source
(Dimensions in mm)



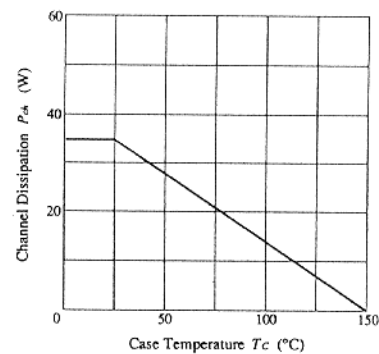
ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Item	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-100	V
Gate-Source Voltage	V_{GSS}	±20	V
Drain Current	I_D	-15	A
Drain Peak Current	I_D (pulse)*	-60	A
Body-Drain Diode Reverse Drain Current	I_{DR}	-15	A
Channel Dissipation	P_{ch} **	35	W
Channel Temperature	T_{ch}	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C

* $PW \leq 10 \mu s$, duty cycle $\leq 1\%$

** Value at $T_c = 25^\circ C$

POWER VS. TEMPERATURE DERATING



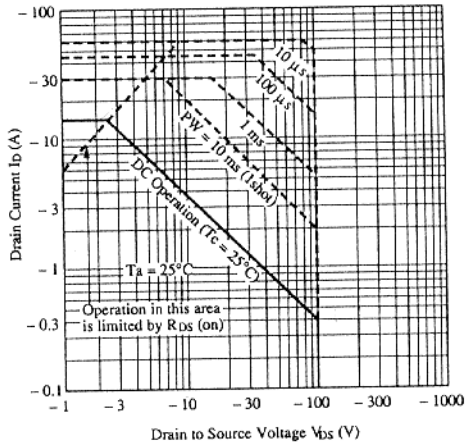
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -10mA, V_{GS} = 0$	-100	—	—	V
Gate-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100 \mu A, V_{DS} = 0$	±20	—	—	V
Gate-Source Leak Current	I_{GSS}	$V_{GS} = \pm 16V, V_{DS} = 0$	—	—	±10	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -80V, V_{GS} = 0$	—	—	-250	μA
Gate-Source Cutoff Voltage	$V_{GS(off)}$	$I_D = -1mA, V_{DS} = -10V$	-1.0	—	-2.0	V
Static Drain-Source on State Resistance	$R_{DS(on)}$	$I_D = -10A, V_{GS} = -10V^*$	—	0.12	0.16	Ω
		$I_D = -10A, V_{GS} = -4V^*$	—	0.16	0.22	
Forward Transfer Admittance	$ y_{fs} $	$I_D = -10A, V_{DS} = -10V^*$	7.5	12	—	S
Input Capacitance	C_{iss}	$V_{DS} = -10V, V_{GS} = 0$ $f = 1MHz$	—	1800	—	pF
Output Capacitance	C_{oss}		—	680	—	pF
Reverse Transfer Capacitance	C_{rss}		—	145	—	pF
Turn-On Delay Time	$t_{d(on)}$		—	15	—	ns
Rise Time	t_r	$I_D = -10A, V_{GS} = -10V,$ $R_L = 3 \Omega$	—	115	—	ns
Turn-Off Delay Time	$t_{d(off)}$		—	320	—	ns
Fall Time	t_f		—	170	—	ns
Body-Drain Diode Forward Voltage	V_{DF}	$I_F = -20A, V_{GS} = 0$	—	-1.05	—	V
Body-Drain Diode Reverse Recovery Time	t_{rr}	$I_F = -20A, V_{GS} = 0$ $di_F/dt = 50A/\mu s$	—	280	—	ns

* Pulse Test

See characteristic curves of 2SJ221.

MAXIMUM SAFE OPERATION AREA



NORMALIZED TRANSIENT THERMAL IMPEDANCE VS. PULSE WIDTH

