

2SJ76, 2SJ77, 2SJ78, 2SJ79

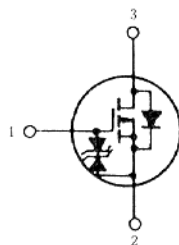
SILICON P CHANNEL MOS FET

HIGH FREQUENCY AND LOW FREQUENCY POWER AMPLIFIER,
HIGH SPEED POWER SWITCHING

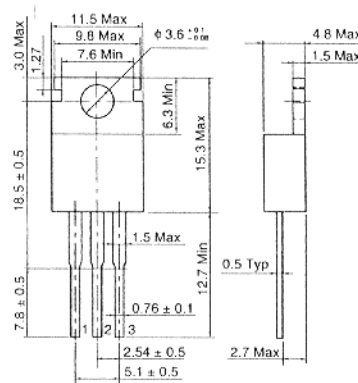
Complementary Pair with 2SK213, 2SK214, 2SK215, 2SK216

FEATURES

- Suitable for Direct Mounting.
- High Forward Transfer Admittance.
- Excellent Frequency Response.
- Enhancement-Mode.



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



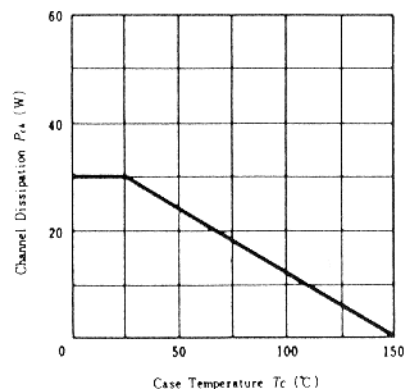
(JEDEC TO-220AB)

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Item	Symbol	Ratings				Unit
		2SJ76	2SJ77	2SJ78	2SJ79	
Drain-Source Voltage	V_{DSX}	-140	-160	-180	-200	V
Gate-Source Voltage	V_{GS}	± 15				V
Drain Current	I_D	-500				mA
Body-Drain Diode Reverse Drain Current	I_{DR}	-500				mA
Channel Dissipation	P_{ch}	1.75				W
	P_{ch}^*	30				W
Channel Temperature	T_{ch}	150				$^\circ\text{C}$
Storage Temperature	T_{stg}	$-45 \sim +150$				$^\circ\text{C}$

*Value at $T_c=25^\circ\text{C}$

POWER VS. TEMPERATURE DERATING

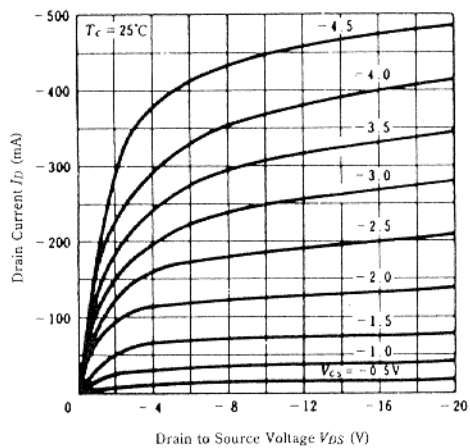


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

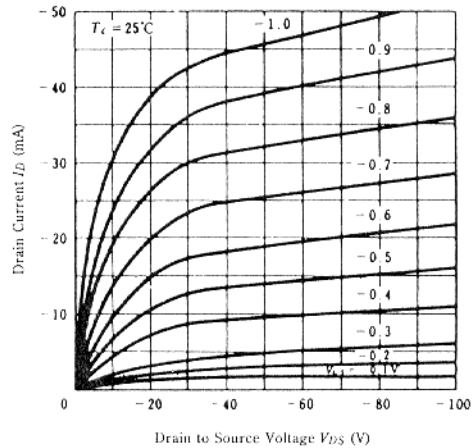
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSX}$	$V_{GS}=2\text{V}, I_D=-1\text{mA}$	-140	—	—	V
			-160	—	—	V
			-180	—	—	V
			-200	—	—	V
Gate-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G=\pm 10\mu\text{A}, V_{DS}=0$	± 15	—	—	V
Gate-Source Voltage	$V_{GS(on)}$	$I_D=-10\text{mA}, V_{DS}=-10\text{V}^*$	-0.2	—	-1.5	V
Drain-Source Saturation Voltage	$V_{DS(sat)}$	$I_D=-10\text{mA}, V_{GD}=0^*$	—	—	-2.0	V
Forward Transfer Admittance	$ y_{fs} $	$I_D=-10\text{mA}, V_{DS}=-20\text{V}^*$	20	35	—	mS
Input Capacitance	C_{iss}	$V_{DS}=-10\text{V}, I_D=-10\text{mA}, f=1\text{MHz}$	—	120	—	pF
Reverse Transfer Capacitance	C_{riss}		—	4.8	—	pF

*Pulse Test

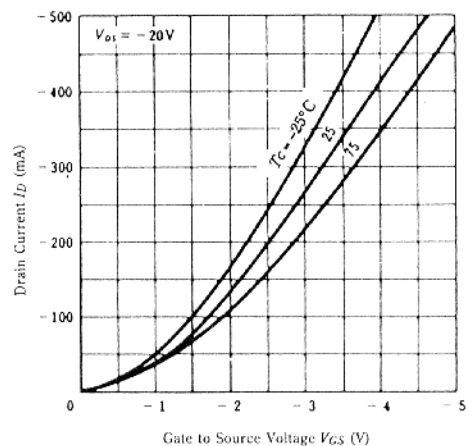
TYPICAL OUTPUT CHARACTERISTICS



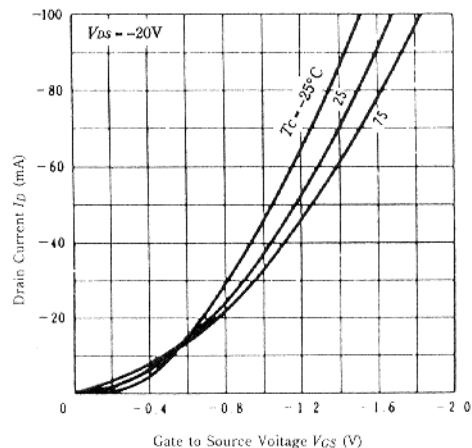
TYPICAL OUTPUT CHARACTERISTICS



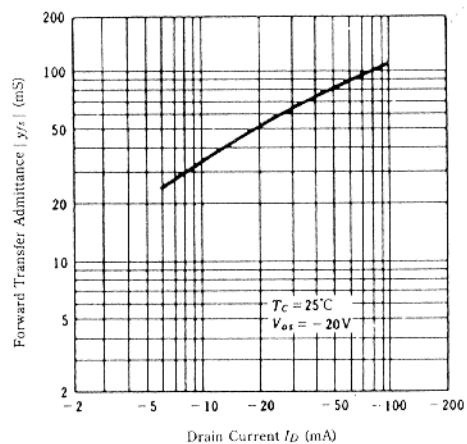
TYPICAL TRANSFER CHARACTERISTICS



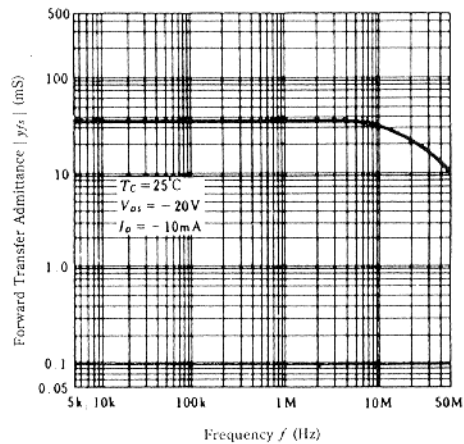
TYPICAL TRANSFER CHARACTERISTICS



FORWARD TRANSFER ADMITTANCE
VS. DRAIN CURRENT

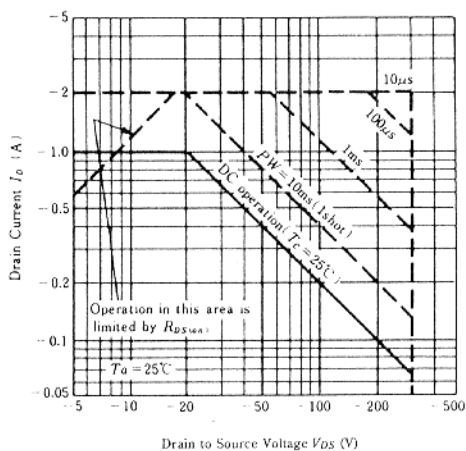


FORWARD TRANSFER ADMITTANCE
VS. FREQUENCY

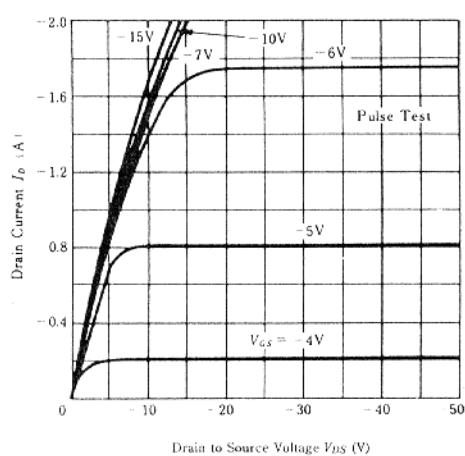


2SJ130,2SJ130

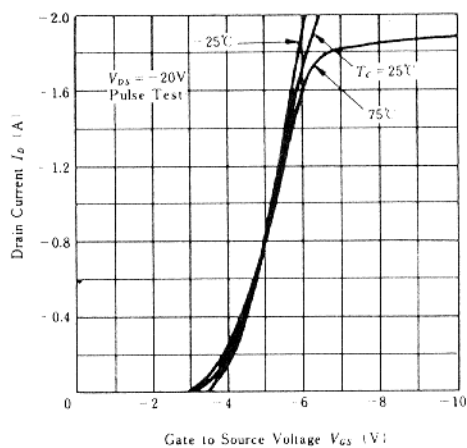
MAXIMUM SAFE OPERATION AREA



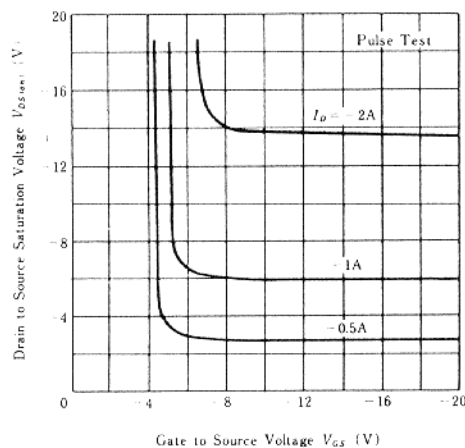
TYPICAL OUTPUT CHARACTERISTICS



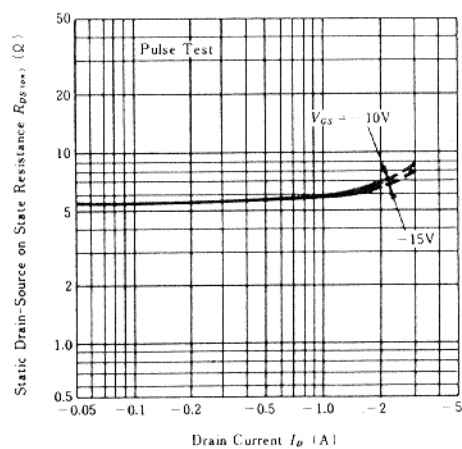
TYPICAL TRANSFER CHARACTERISTICS



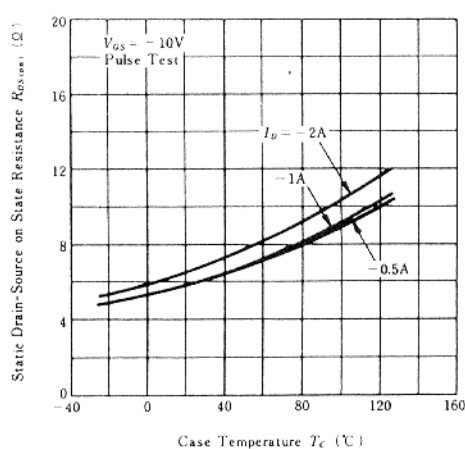
DRAIN-SOURCE SATURATION VOLTAGE VS. GATE SOURCE VOLTAGE



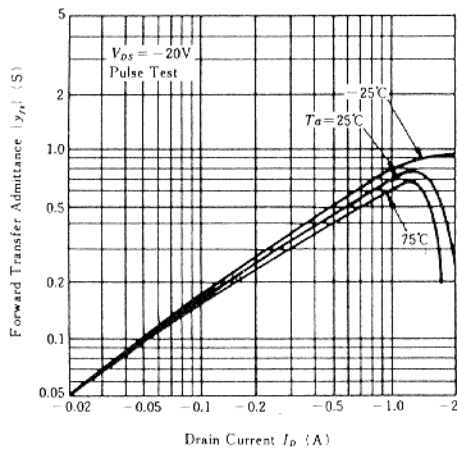
STATIC DRAIN-SOURCE ON STATE RESISTANCE VS. DRAIN CURRENT



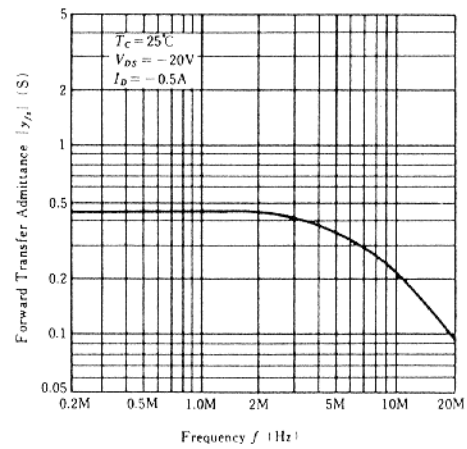
STATIC DRAIN-SOURCE ON STATE RESISTANCE VS. TEMPERATURE



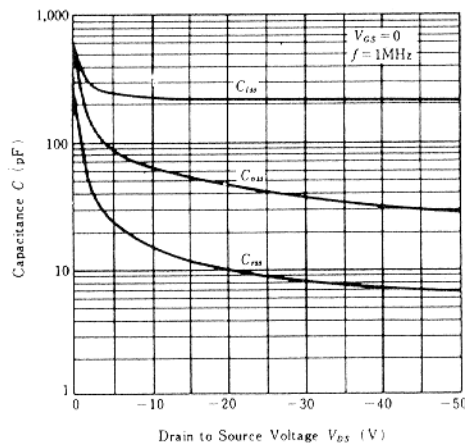
FORWARD TRANSFER ADMITTANCE
VS. DRAIN CURRENT



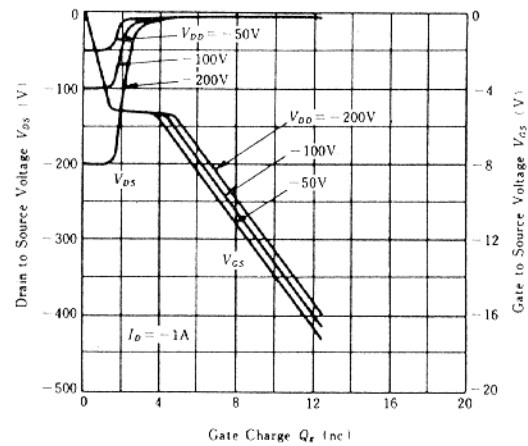
FORWARD TRANSFER ADMITTANCE
VS. FREQUENCY



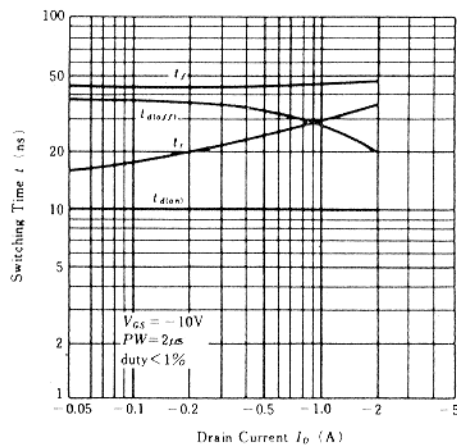
TYPICAL CAPACITANCE
VS. DRAIN-SOURCE VOLTAGE



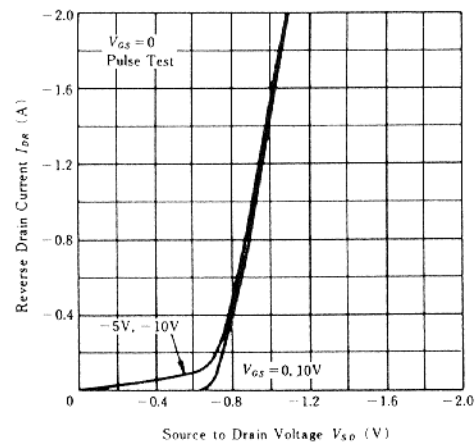
DYNAMIC INPUT CHARACTERISTICS



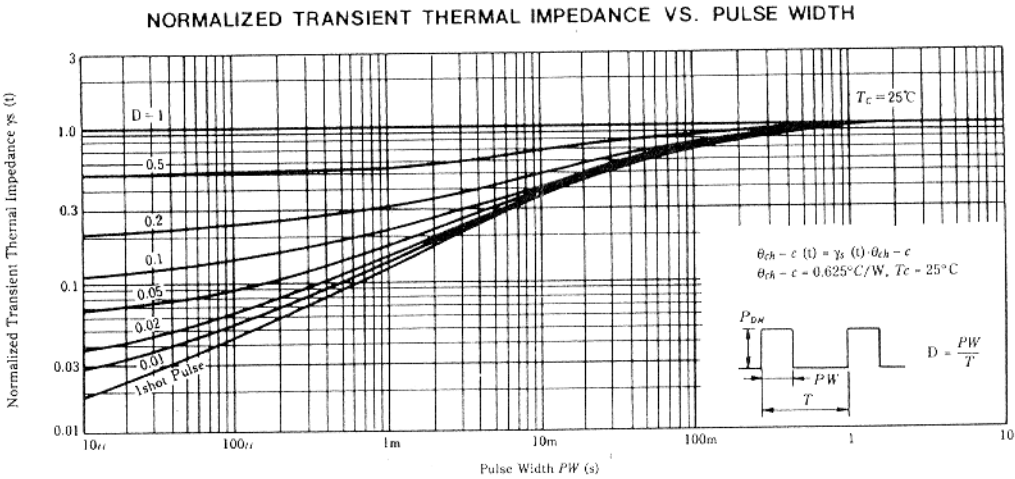
SWITCHING CHARACTERISTICS



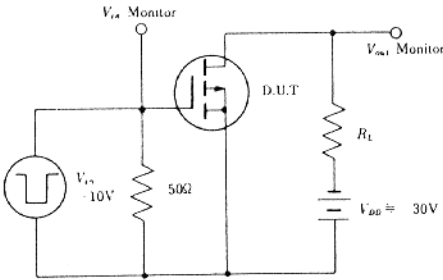
REVERSE DRAIN CURRENT VS.
SOURCE TO DRAIN VOLTAGE



2SJ130,2SJ130



SWITCHING TIME TEST CIRCUIT



WAVEFORMS

