Hitachi Electronic Components Data book
For Discrete Products
1st Edition March 97, Windows and Macintosh Version

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HITACHI

HITACHI

2SJ76,2SJ77, 2SJ78,2SJ79

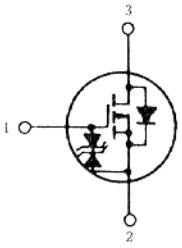
SILICON P CHANNEL MOS FET

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

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

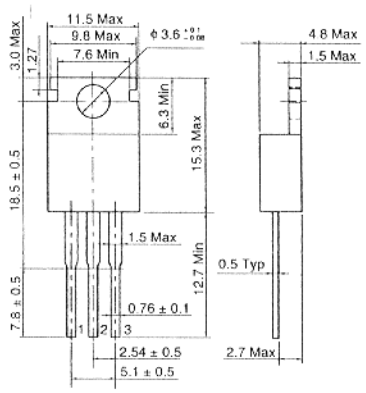
■ FEATURES

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



1. Gate
2. Source (Flange)
3. Drain

(Dimensions in mm)



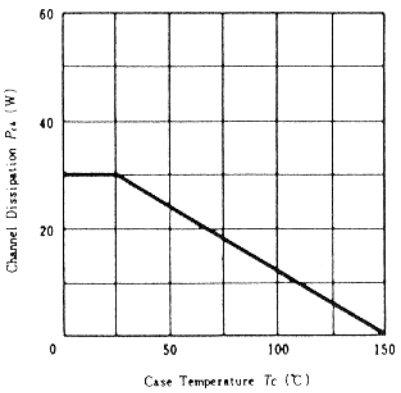
(JEDEC TO-220AB)

■ ABSOLUTE MAXIMUM RATINGS (T_a=25 °C)

Item	Symbol	Ratings				Unit
		2SJ76	2SJ77	2SJ78	2SJ79	
Drain-Source Voltage	V_{DSX}	−140	−160	−180	−200	V
Gate-Source Voltage	V_{GSS}	±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				°C
Storage Temperature	T_{stg}	−45 ~ +150				°C

*Value at T_c=25 °C

POWER VS. TEMPERATURE DERATING



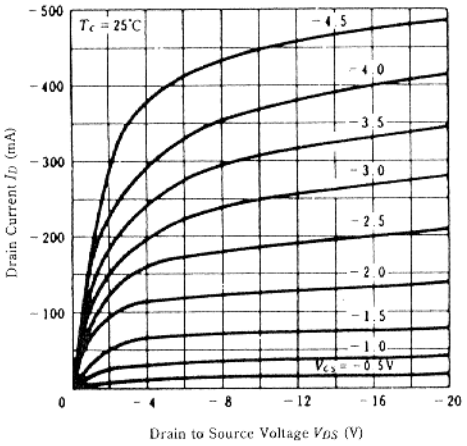
■ ELECTRICAL CHARACTERISTICS (T_a=25 °C)

Item		Symbol	Test Condition	min.	typ.	max.	Unit
Drain-Source Breakdown Voltage	2SJ76	$V_{(BR)DSX}$	V_{GS}=2V, I_D=−1mA	−140	—	—	V
	2SJ77			−160	—	—	V
	2SJ78			−180	—	—	V
	2SJ79			−200	—	—	V
Gate-Source Breakdown Voltage		$V_{(BR)GSS}$	I_G=±10μA, V_{DS}=0	±15	—	—	V
Gate-Source Voltage		$V_{GS(off)}$	I_D=−10mA, V_{DS}=−10V*	−0.2	—	−1.5	V
Drain-Source Saturation Voltage		$V_{DS(sat)}$	I_D=−10mA, V_{GD}=0*	—	—	−2.0	V
Forward Transfer Admittance		$\|y_{fs}\|$	I_D=−10mA, V_{DS}=−20V*	20	35	—	mS
Input Capacitance		C_{iss}	V_{DS}=−10V, I_D=−10mA, f=1MHz	—	120	—	pF
Reverse Transfer Capacitance		C_{rss}		—	4.8	—	pF

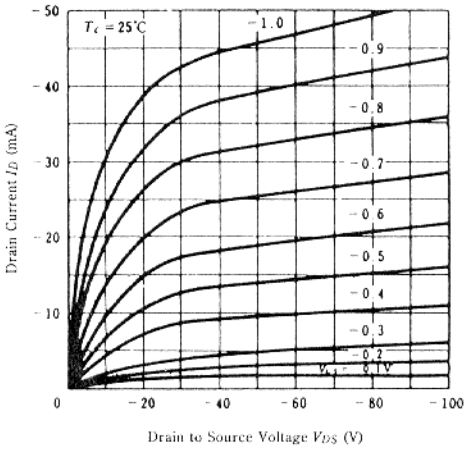
*Pulse Test

2SJ76,2SJ77,2SJ78,2SJ79

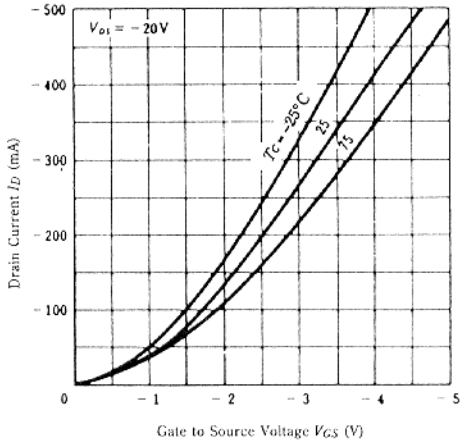
TYPICAL OUTPUT CHARACTERISTICS



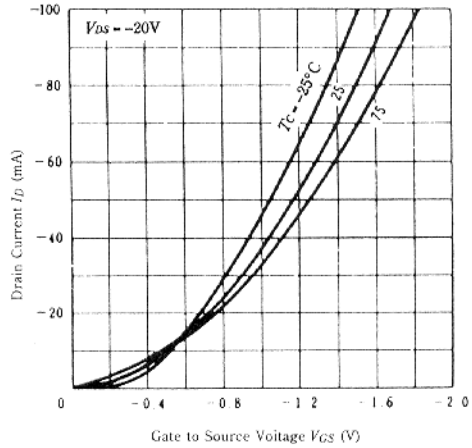
TYPICAL OUTPUT CHARACTERISTICS



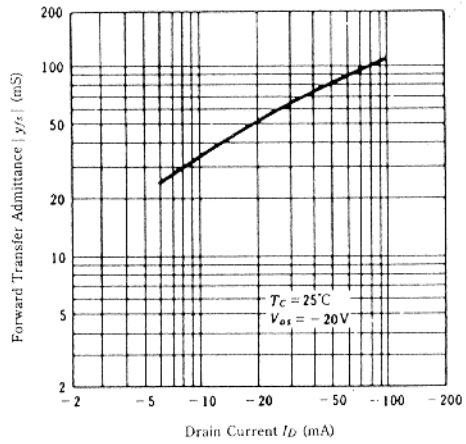
TYPICAL TRANSFER CHARACTERISTICS



TYPICAL TRANSFER CHARACTERISTICS



FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT



FORWARD TRANSFER ADMITTANCE VS. FREQUENCY