P-Channel MOSFET Transistor

2SJ77K / J77K

160V / 0.5A

DATASHEET

OEM – Hitachi

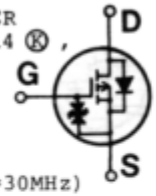
Source: Hitachi Databook Power Mosfet Data 4/83

Datasheet Rev. 2.0 – 09/19 – data without warranty / liability

2SJ77Ⓚ, 2SJ79Ⓚ

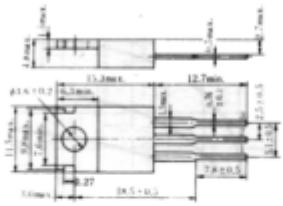
SILICON P-CHANNEL MOS FET

HIGH SPEED POWER SWITCHING,
HIGH FREQUENCY POWER AMPLIFIER
Complementary Pari with 2SK214 Ⓚ, K216 Ⓚ



Features;

- High Speed Switching.
- High Cutoff Frequency. (f_C=30MHz)
- High Breakdown Voltage.
- Suitable for Switching Regulator, DC-DC Converter, RF Amplifiers, and Ultrasonic Power Oscillators.



(Dimensions in mm)
(JEDEC TO-220AB)

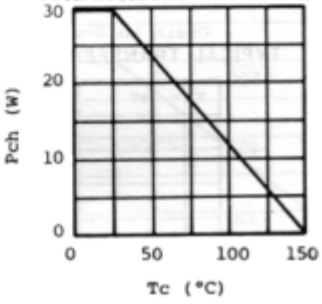
1. Gate
2. Source (Flange)
3. Drain

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	Rating J77Ⓚ	Rating J79Ⓚ	Unit
Drain-Source Voltage	V_{DSX}	-160	-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	Pch	1.75		W
	Pch*	30		W
Channel Temperature	Tch	150		°C
Storage Temperature	Tstg	-45 ~ +150		°C

*Value at Tc=25°C

POWER VS. TEMPERATURE DERATING

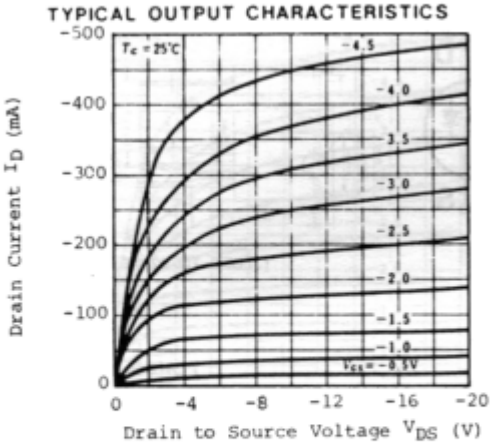


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

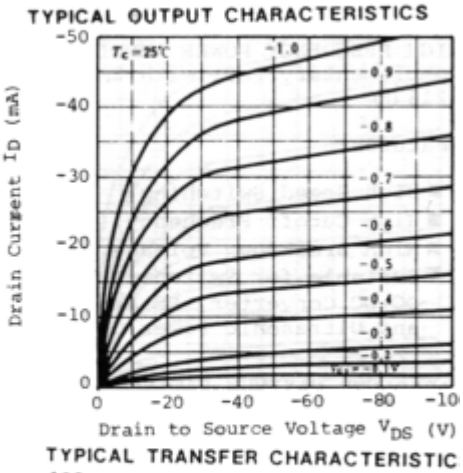
Item		Symbol	Test Condition	min.	typ.	max.	Unit
Drain-Source Breakdown Voltage	J77Ⓚ	$V_{(BR)DSX}$	I_D=-1mA, V_{GS}=2V	-160	-	-	V
	J79Ⓚ			-200	-	-	V
Gate-Source Breakdown Voltage		$V_{(BR)GSS}$	I_G=±10μA, V_{DS}=0	±15	-	-	V
Gate-Source Voltage		$V_{GS(on)}$	I_D=-10mA, V_{DS}=-10V*	-0.2	-	-1.5	V
Drain-Source Saturation Voltage		$V_{DS(sat)}$	I_D=-10mA, V_{GD}=0 *	-	-	-2.0	V
Forward Transfer Capacitance		|Yfs|	I_D=-10mA, V_{DS}=-20V*	-	35	-	mS
Input Capacitance		Ciss	V_{DS}=-10V, I_D=-10mA, f=1MHz	-	120	-	pF
Reverse Transfer Capacitance		Crss		-	4.8	-	pF

*Pulse Test

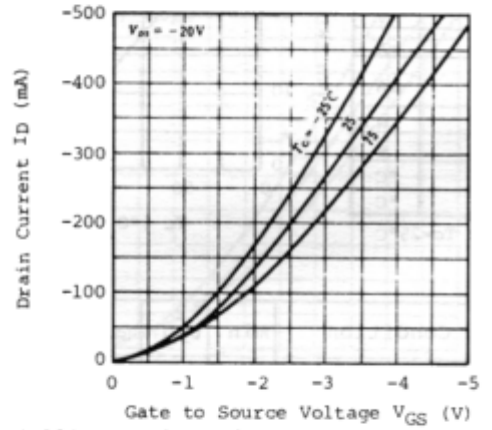
TYPICAL OUTPUT CHARACTERISTICS



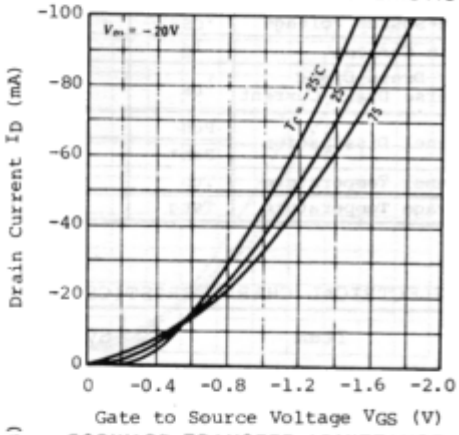
TYPICAL OUTPUT CHARACTERISTICS



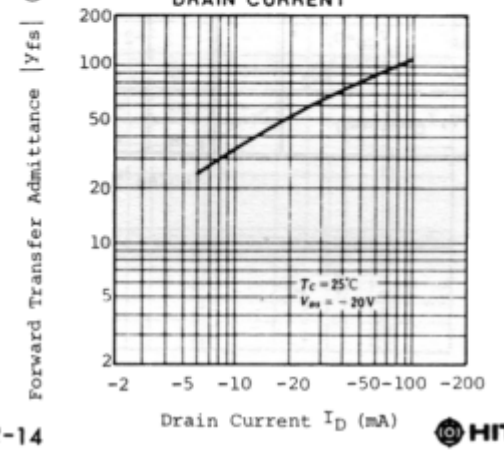
TYPICAL TRANSFER CHARACTERISTICS



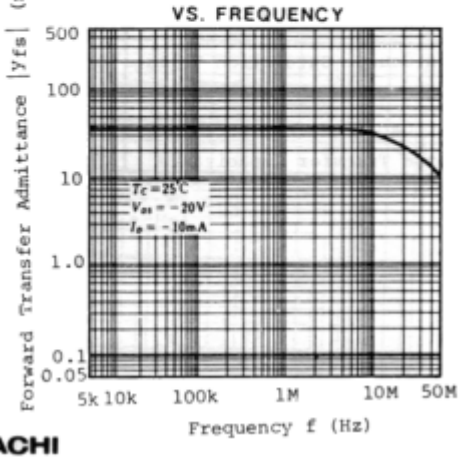
TYPICAL TRANSFER CHARACTERISTIC



FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT



FORWARD TRANSFER ADMITTANCE VS. FREQUENCY



HITACHI