

# N-Channel MOSFET Transistor

## **2SK295 / K295**

100V / 5A

# DATASHEET

OEM – Hitachi

Source: Hitachi Databook Power Mosfet Data 4/83

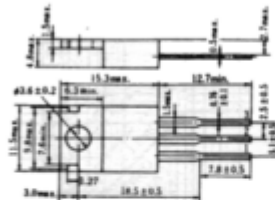
# 2SK294, 2SK295

## SILICON N-CHANNEL MOS FET

HIGH SPEED POWER SWITCHING  
HIGH FREQUENCY POWER AMPLIFIER

Features;

- Low On-Resistance.
- High Speed Switching.
- High Cutoff Frequency.
- No Secondary Breakdown.
- Suitable for Switching Regulator, DC-DC Converter, RF Amplifiers, and Ultrasonic Power Oscillators.



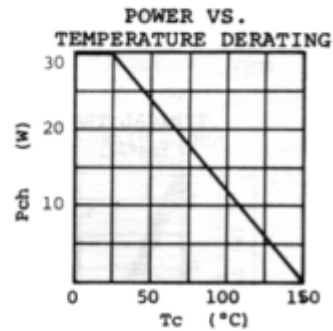
1. Gate
  2. Drain (Flange)
  3. Source
- (Dimensions in mm)

(JEDEC TO-220AB)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	K294	K295	Unit
Drain-Source Voltage	V <sub>DSS</sub>	80	100	V
Gate-Source Voltage	V <sub>GSS</sub>	±20		V
Drain Current	I <sub>D</sub>	5		A
Drain Peak Current	I <sub>D(peak)</sub>	10		A
Body-Drain Diode Reverse Drain Current	I <sub>DR</sub>	5		A
Channel Dissipation	P <sub>ch</sub> *	30		W
Channel Temperature	T <sub>ch</sub>	150		°C
Storage Temperature	T <sub>stg</sub>	-55 ~ +150		°C

\*Value at Tc=25°C



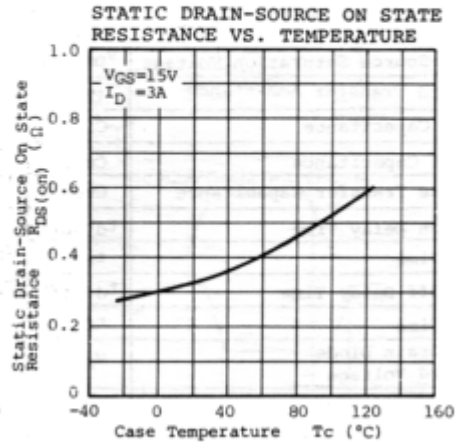
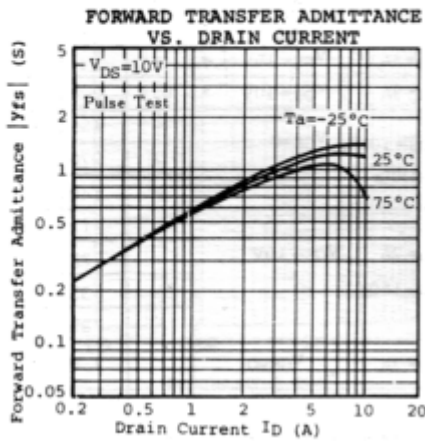
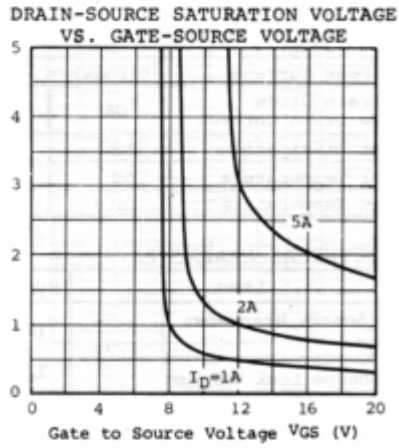
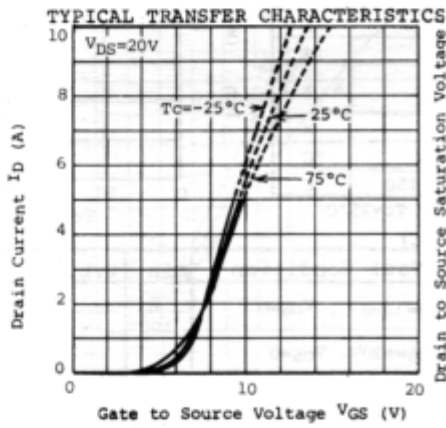
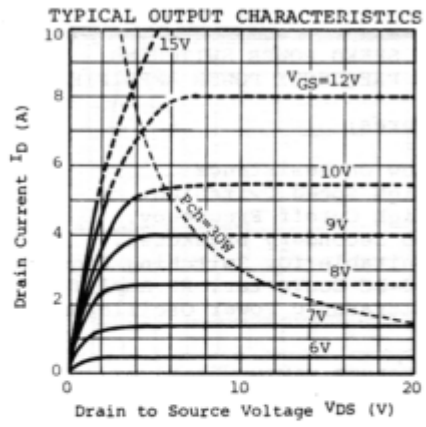
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain-Source Breakdown Voltage	K294 K295	V(BR) <sub>DSS</sub> I <sub>D</sub> =10mA, V <sub>GS</sub> =0	80	-	-	V
			100	-	-	V
Gate-Source Leak Current	I <sub>GSS</sub>	V <sub>GS</sub> =±20V, V <sub>DS</sub> =0	-	-	±1	µA
Zero Gate Voltage Drain Current	K294 K295	I <sub>DSS</sub> V <sub>DS</sub> =65V, V <sub>GS</sub> =0 V <sub>DS</sub> =80V, V <sub>GS</sub> =0	-	-	1	mA
			-	-	1	mA
Gate-Source Cutoff Voltage	V <sub>GS(off)</sub>	I <sub>D</sub> =1mA, V <sub>DS</sub> =10V	1.0	-	5.0	V
Static Drain-Source On State Resistance	R <sub>DS(on)</sub>	I <sub>D</sub> =3A, V <sub>GS</sub> =15V *	-	0.4	0.56	Ω
Drain-Source Saturation Voltage	V <sub>DS(on)</sub>	I <sub>D</sub> =3A, V <sub>GS</sub> =15V *	-	1.2	1.7	V
Forward Transfer Admittance	y <sub>fs</sub>	I <sub>D</sub> =3A, V <sub>DS</sub> =10V *	0.5	0.8	-	S
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0	-	450	-	pF
Output Capacitance	C <sub>oss</sub>	f=1MHz	-	270	-	pF
Reverse Transfer Capacitance	C <sub>rss</sub>		-	140	-	pF
Turn-On Delay Time	t <sub>d(on)</sub>	I <sub>D</sub> =2A, V <sub>GS</sub> =15V R <sub>L</sub> =15Ω	-	12	-	ns
Rise Time	t <sub>r</sub>		-	28	-	ns
Turn-Off Delay Time	t <sub>d(off)</sub>		-	35	-	ns
Fall Time	t <sub>f</sub>		-	35	-	ns
Body-Drain Diode Forward Voltage	V <sub>DF</sub>	I <sub>F</sub> =3A, V <sub>GS</sub> =0	-	1.0	-	V
Body-Drain Diode Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =3A, V <sub>GS</sub> =0	-	350	-	ns



\*Pulse Test

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