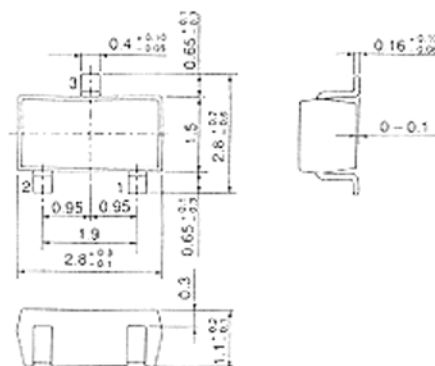


2SK1031

SILICON N-CHANNEL JUNCTION FET
LOW FREQUENCY AMPLIFIER



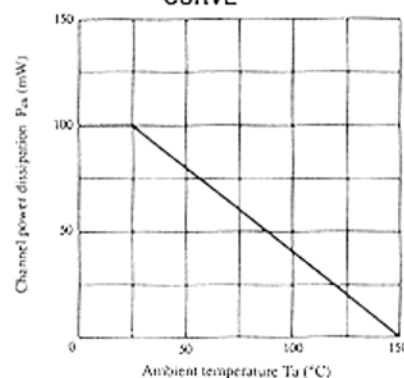
1. Drain
 2. Source
 3. Gate
- (Dimensions in mm)

(MPAK)

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

Item	Symbol	2SK1031	Unit
Gate to drain voltage	V_{GDO}	-50	V
Gate to source voltage	V_{GSS}	-50	V
Drain current	I_D	10	mA
Channel power dissipation	P_{ch}	100	mW
Channel temperature	T_{ch}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

MAXIMUM CHANNEL DISSIPATION CURVE



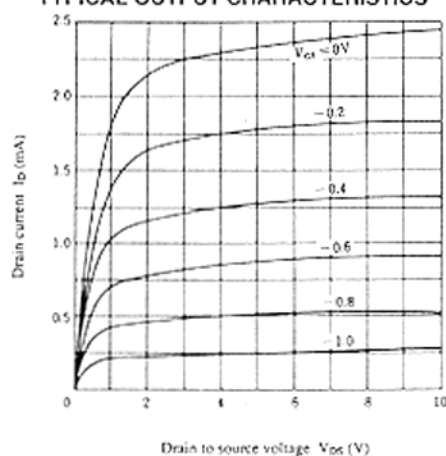
■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Gate to source breakdown voltage	$V_{(BR)GSS}$	$I_G = -100\mu\text{A}$, $V_{DS} = 0$	-50	—	—	V
Gate cutoff current	I_{GSS}	$V_{GS} = -30\text{V}$, $V_{DS} = 0$	—	—	-10	nA
Drain current	I_{DSS}^*	$V_{DS} = 15\text{V}$, $V_{GS} = 0$	0.6	—	6.5	mA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS} = 15\text{V}$, $I_D = 0.1\mu\text{A}$	-0.4	—	-5	V
Forward transfer admittance	$ y_{fs} $	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{kHz}$	1.0	—	—	mS
Input capacitance	C_{iss}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$	—	6	—	pF
Reverse transfer capacitance	C_{rss}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$	—	1.4	—	pF

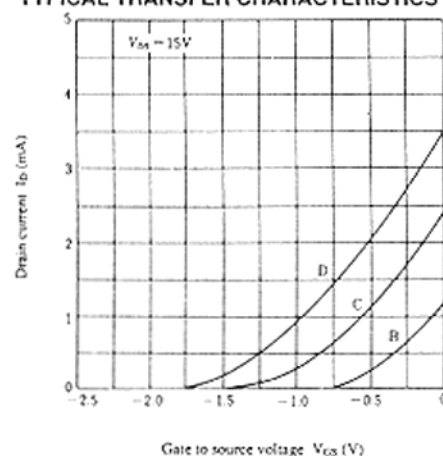
* The 2SK1031 is grouped by I_{DSS} as follows.

Grade	B	C	D
Mark	XDB	XDC	XDD
$I_{DSS}(\text{max})$	0.6 to 1.4	1.2 to 3.0	2.6 to 6.5

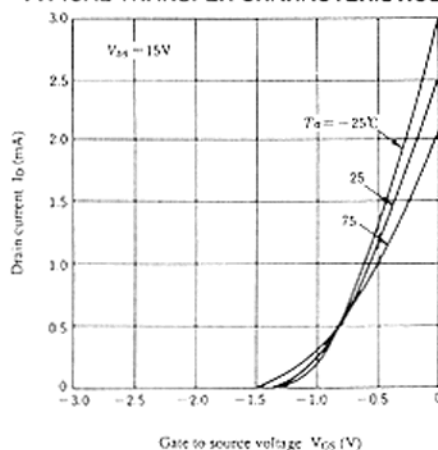
TYPICAL OUTPUT CHARACTERISTICS



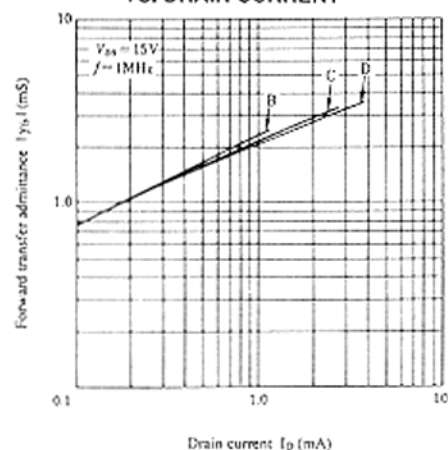
TYPICAL TRANSFER CHARACTERISTICS



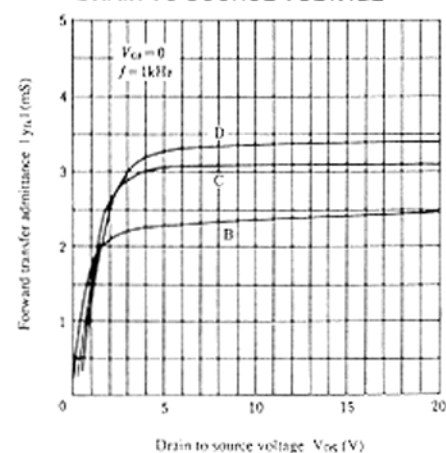
TYPICAL TRANSFER CHARACTERISTICS



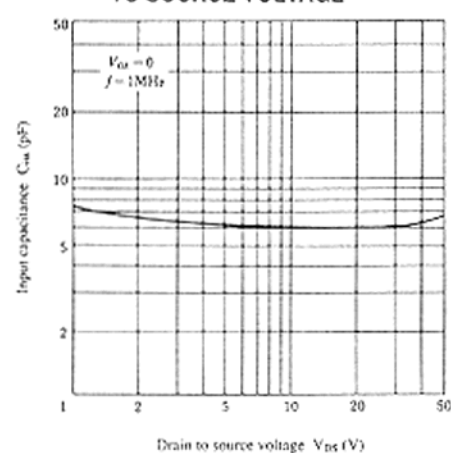
FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT



FORWARD TRANSFER ADMITTANCE VS. DRAIN TO SOURCE VOLTAGE



INPUT CAPACITANCE VS. DRAIN TO SOURCE VOLTAGE



2SK1031

REVERSE TRANSFER CAPACITANCE VS.
DRAIN TO SOURCE VOLTAGE