

2SK48

SILICON N CHANNEL JUNCTION TYPE (INDUSTRIAL APPLICATIONS)

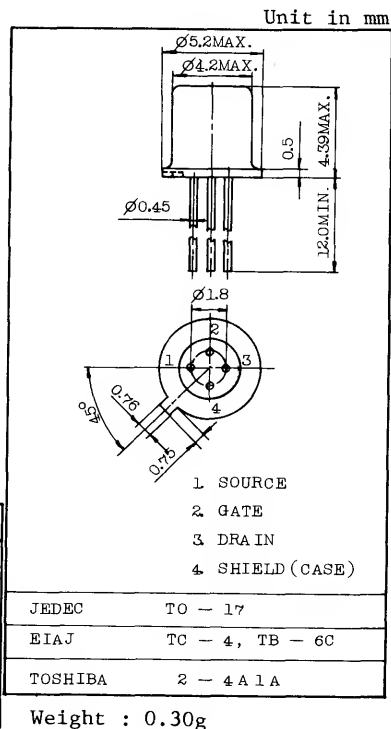
MEDICAL ELECTRONIC EQUIPMENT APPLICATIONS.

FEATURES:

- Ultra Low Noise
 - : $NF=0.5\text{dB}$ (Typ.) at $R_g=100\text{k}\Omega$, $f=120\text{Hz}$
 - : $V_{Np-p}=1.7\mu\text{V}$ (Typ.) at $R_g=10\text{k}\Omega$, $f=5\sim 50\text{Hz}$
- High Gain: $|Y_{fs}| = 1.0\sim 5.0\text{mS}$
- High Input Impedance
 - : $I_{GSS}=-0.1\text{nA}$ (Max.) at $V_{GS}=-10\text{V}$.

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

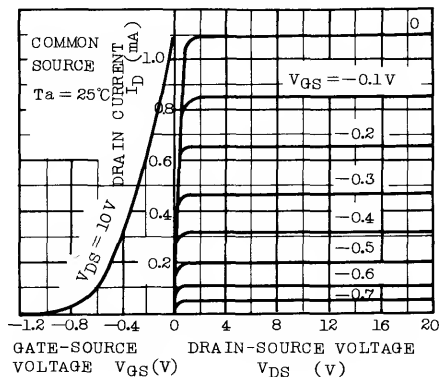
CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDS}	-20	V
Gate Current	I_G	10	mA
Drain Power Dissipation	P_D	100	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-65 \sim 150$	$^\circ\text{C}$



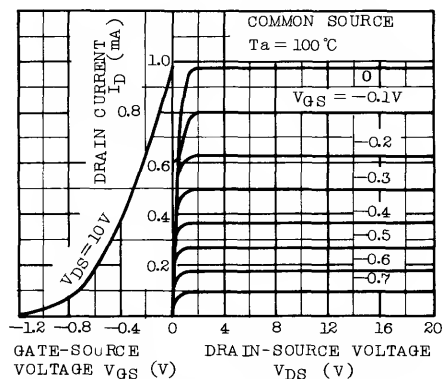
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{GS}=-10\text{V}$, $V_{DS}=0$	-	-	-0.1	nA
Gate-Drain Breakdown Voltage	$V_{(BR)GDS}$	$V_{DS}=0$, $I_G=-0.1\text{mA}$	-20	-	-	V
Drain Current	I_{DSS}	$V_{DS}=10\text{V}$, $V_{GS}=0$	0.3	-	3.0	mA
Gate Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS}=10\text{V}$, $I_D=0.1\mu\text{A}$	-0.35	-	-2.3	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{kHz}$	1.0	-	5.0	mS
Gate Capacitance	C_G	$V_{GS}=-10\text{V}$, $V_{DS}=0$, $f=1\text{kHz}$	-	5.0	8.0	pF
Noise Voltage (peak to peak)	$V_{N(p-p)}$	$V_{DS}=5\text{V}$, $I_D=450\mu\text{A}$, $R_g=10\text{k}\Omega$, $f=5 \sim 50\text{Hz}$	-	1.7	4.0	μV
Noise Figure	NF	$V_{DS}=10\text{V}$, $I_D=450\mu\text{A}$, $R_g=100\text{k}\Omega$, $f=120\text{Hz}$	-	0.5	5.0	dB

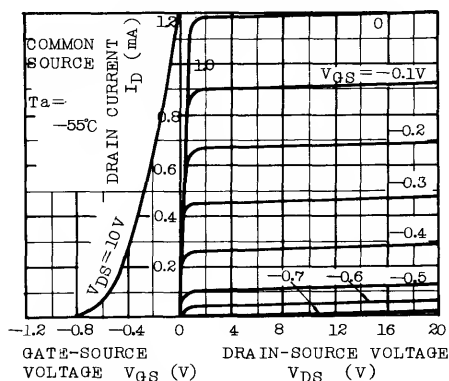
STATIC CHARACTERISTICS



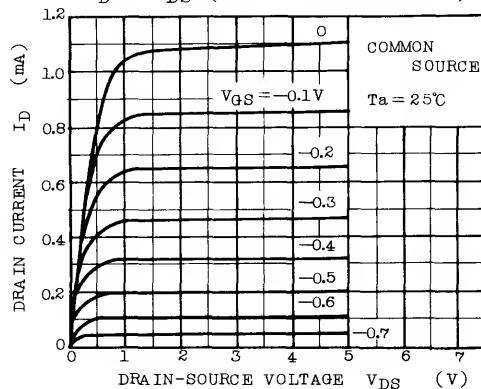
STATIC CHARACTERISTICS



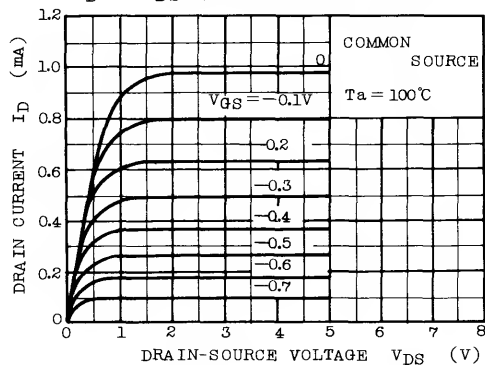
STATIC CHARACTERISTICS



$I_D - V_{DS}$ (LOW VOLTAGE REGION)



$I_D - V_{DS}$ (LOW VOLTAGE REGION)



$I_D - V_{DS}$ (LOW VOLTAGE REGION)

