

SILICON N CHANNEL JUNCTION TYPE

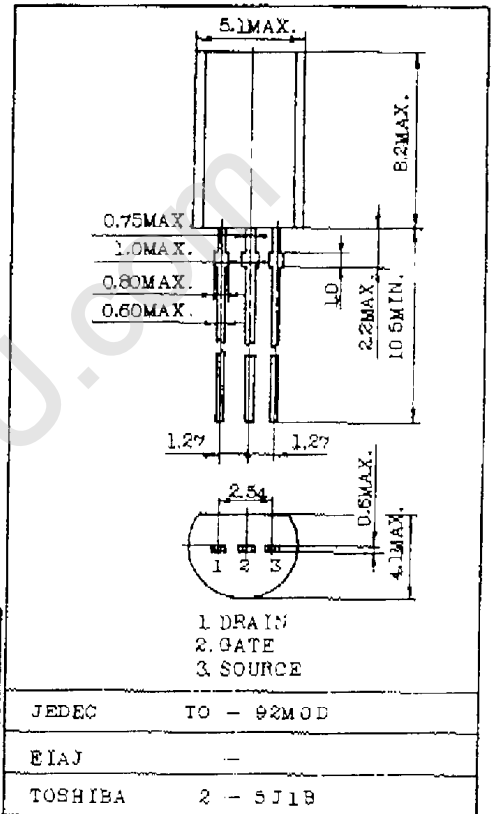
2SK147

Unit in mm

LOW NOISE AUDIO AMPLIFIER APPLICATIONS.

FEATURES:

- High $|y_{fs}|$
: $|y_{fs}|=40\text{mS(Typ.)}$ ($V_{DS}=10\text{V}$, $V_{GS}=0$, $I_{DSS}=5\text{mA}$)
- High Breakdown Voltage : $V_{GDS}=-40\text{V}$
- Low Noise : $NF=1.0\text{dB}$ (Typ.)
($V_{DS}=10\text{V}$, $I_D=5\text{mA}$, $f=1\text{kHz}$, $R=100\Omega$)
- High Input Impedance
: $I_{GSS}=-1\text{nA (Max.)}$ ($V_{GS}=-30\text{V}$)
- High Drain Power Dissipation : $P_D=600\text{mW}$
- Complementary to 2SJ72.



1 DRAIN
2 GATE
3 SOURCE

JEDEC TO-92MOD
EIAJ -
TOSHIBA 2-5J1B
Weight : 0.36g

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDS}	-40	V
Gate Current	I_G	10	mA
Drain Power Dissipation	P_D	600	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~125	$^\circ\text{C}$

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{GS}=-30\text{V}$, $V_{DS}=0$	-	-	-1.0	nA
Gate-Drain Breakdown Voltage	$V(BR)_{GDS}$	$V_{DS}=0$, $I_G=-100\mu\text{A}$	-40	-	-	V
Drain Current	I_{DSS} (Note 1)	$V_{DS}=10\text{V}$, $V_{GS}=0$	5.0	-	30	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS}=10\text{V}$, $I_D=0.1\mu\text{A}$	-0.3	-	-1.2	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{kHz}$, (Typ: $I_{DSS}=5\text{mA}$)	30	40	-	mS
Input Capacitance	C_{iss}	$V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$	-	75	-	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10\text{V}$, $I_D=0$, $f=1\text{MHz}$	-	15	-	pF
Noise Figure (Note 2)	NF(1)	$V_{DS}=10\text{V}$, $R_g=100\Omega$, $I_D=5\text{mA}$, $f=100\text{Hz}$	-	5	10	dB
	NF(2)	$V_{DS}=10\text{V}$, $R_g=100\Omega$, $I_D=5\text{mA}$, $f=1\text{kHz}$	-	1	2	dB

Note 1 : I_{DSS} Classification GR : 5.0~10.0, BL : 8.0~16.0, V : 14.0~30.0

2 : When low noise audio amplifier, recommended V_{DS} up to 15V.