

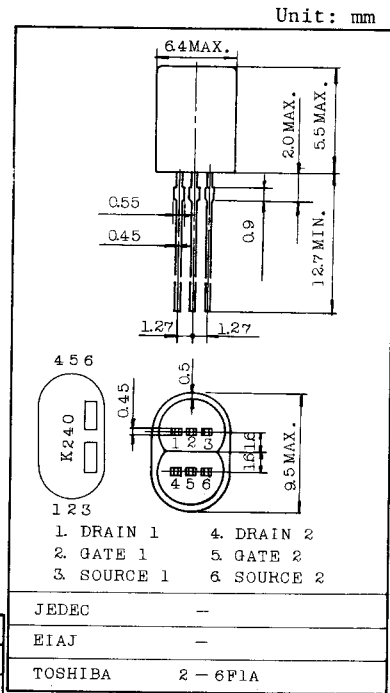
LOW NOISE AUDIO AMPLIFIER APPLICATIONS.  
DIFFERENTIAL AMPLIFIER APPLICATIONS.

FEATURES:

- Recommended for first stages of EQ Amplifiers.
- High  $|y_{fs}|$  :  $|y_{fs}|=22\text{mS}(\text{Typ.})$   
( $V_{DS}=10\text{V}$ ,  $V_{GS}=0$ ,  $I_{DSS}=3\text{mA}$ )
- Excellent Pair Characteristics  
:  $|V_{GS1} - V_{GS2}|=20\text{mV}(\text{Max.})$   
( $V_{DS}=10\text{V}$ ,  $I_D=1\text{mA}$ )
- High Breakdown Voltage :  $V_{GDS}=-40\text{V}(\text{Min.})$
- Low Noise :  $e_n=0.95\text{nV}/\sqrt{\text{Hz}}(\text{Typ.})$   
( $V_{DS}=10\text{V}$ ,  $I_D=1\text{mA}$ ,  $f=1\text{kHz}$ )
- High Input Impedance :  $I_{GSS}=-1\text{nA}(\text{Max.})$  ( $V_{GS}=-30\text{V}$ )
- Complementary to 2SJ75.

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	$P_D$	400×2	mW
Junction Temperature	$T_j$	125	°C
Storage Temperature Range	$T_{stg}$	-55~125	°C



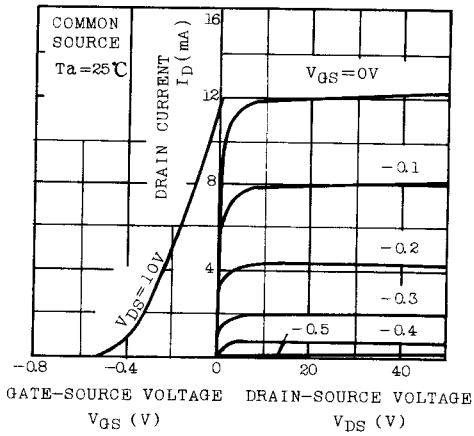
Weight: 0.72 g

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

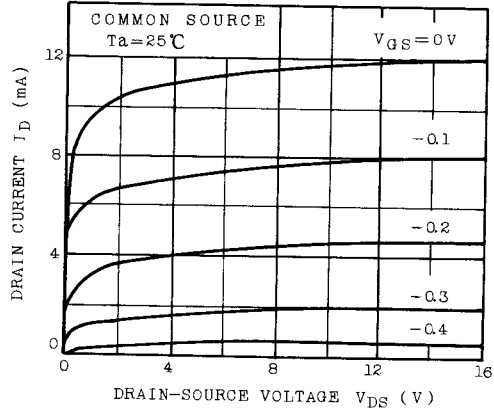
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	$I_{GSS}$	$V_{GS}=-30\text{V}$ , $V_{DS}=0$	-	-	-1.0	nA
Gate-Drain Breakdown Voltage	$V(\text{BR})_{GDS}$	$V_{DS}=0$ , $I_G=-100\mu\text{A}$	-40	-	-	V
Drain Current	$I_{DSS}(\text{Note})$	$V_{DS}=10\text{V}$ , $V_{GS}=0$	2.6	-	20	mA
Gate-Source Cut-off Voltage	$V_{GS}(\text{OFF})$	$V_{DS}=10\text{V}$ , $I_D=0.1\mu\text{A}$	-0.2	-	-1.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$ , $V_{GS}=0$ , $f=1\text{kHz}$	15	22	-	mS
Differential Gate-Source Voltage	$ V_{GS1}-V_{GS2} $	$V_{DS}=10\text{V}$ , $I_D=1\text{mA}$	-	-	20	mV
Input Capacitance	$C_{iss}$	$V_{DS}=10\text{V}$ , $V_{GS}=0$ , $f=1\text{MHz}$	-	30	-	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DG}=10\text{V}$ , $I=0$ , $f=1\text{MHz}$	-	6	-	pF
Noise Figure	NF(1)	$V_{DS}=10\text{V}$ , $I_D=1.0\text{mA}$ , $R_g=1\text{k}\Omega$ , $f=10\text{Hz}$	-	1.0	10	dB
	NF(2)	$V_{DS}=10\text{V}$ , $I_D=1.0\text{mA}$ , $R_g=1\text{k}\Omega$ , $f=1\text{kHz}$	-	0.5	2	

Note:  $I_{DSS}$  Classification GR : 2.6~6.5, BL : 6.0~12, V : 10~20

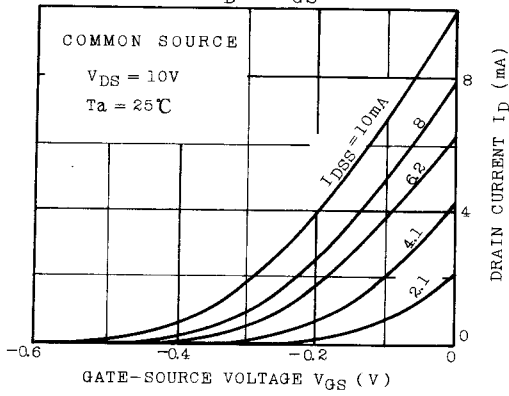
STATIC CHARACTERISTICS



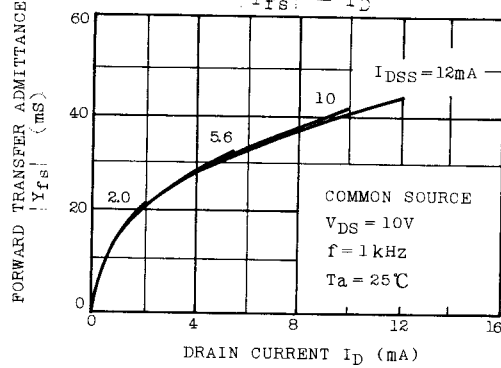
$I_D - V_{DS}$  (LOW VOLTAGE REGION)



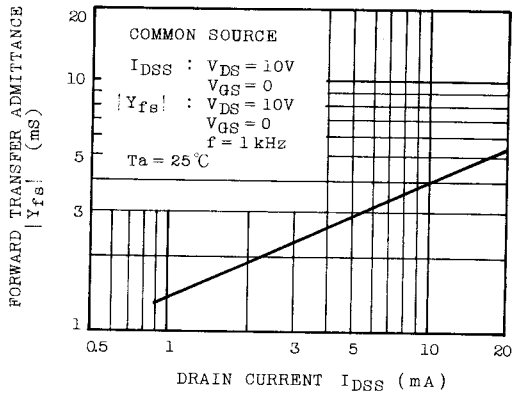
$I_D - V_{GS}$



$|Y_{fs}| - I_D$



$|Y_{fs}| - I_{DSS}$



$V_{GS(OFF)} - I_{DSS}$

