

(FIELD-EFFECT TRANSISTOR)

**2SK433**

FOR LOW FREQUENCY AMPLIFY APPLICATION  
N CHANNEL JUNCTION TYPE

**DESCRIPTION**

2SK433 is a super mini outline resin sealed silicon N channel junction type FET. It is designed for low frequency voltage amplify,application, analog switch application.

**FEATURE**

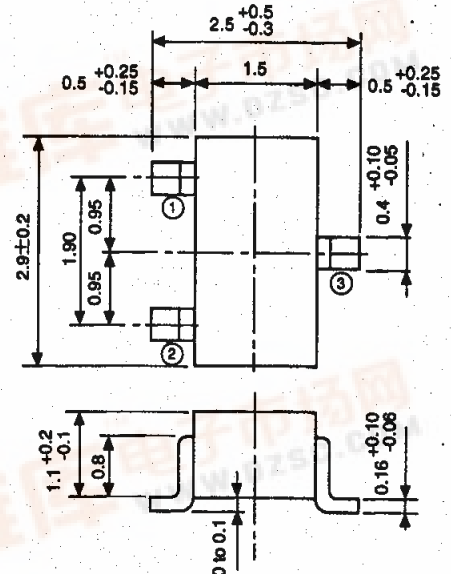
- Small type for mounting
- High  $|y_{fs}|$   $|y_{os}|=4mS(\text{typ})$
- Low  $R_{DS(ON)}$   $R_{DS(ON)}=250\Omega$  typ

**APPLICATION**

General purpose voltage amplify,analog switch circuit for stereo,cassette deck,VCR.

**OUTLINE DRAWING**

Unit:mm



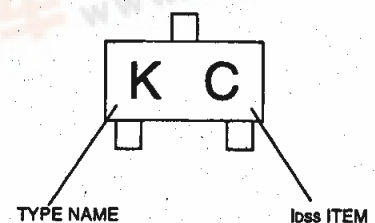
**TERMINAL CONNECTOR**

- ① : SOURCE
- ② : DRAIN
- ③ : GATE

EIAJ : SC-59  
JEDEC : TO-236 resemblance

Note) The dimension without tolerance represent central value.

**MARKING**



**MAXIMUM RATINGS (Ta=25°C)**

Symbol	Parameter	Ratings	Unit
V <sub>(BR)GDO</sub>	Gate to Drain voltage	-50	V
I <sub>G</sub>	Gate current	10	mA
P <sub>T</sub>	Total allowable dissipation(Ta=25°C)	150	mW
T <sub>ch</sub>	Channel temperature	+125	°C
T <sub>stg</sub>	Storage temperature	-55 to +125	°C

**ELECTRICAL CHARACTERISTICS (Ta=25°C)**

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V <sub>(BR)GDO</sub>	G to D break down voltage	I <sub>G</sub> =-10 μA, I <sub>S</sub> =0	-50			V
I <sub>GSS</sub>	Gate leakage current	V <sub>GS</sub> =-30V, V <sub>DS</sub> =0			-1	nA
I <sub>DSS</sub> *	Drain current	V <sub>DS</sub> =10V, V <sub>GS</sub> =0	0.6		12	mA
V <sub>GS(off)</sub>	Cut off voltage	V <sub>DS</sub> =10V, I <sub>D</sub> =10 μA	-0.3	-1.5	-6.0	V
y <sub>fs</sub>	Forward transfer admittance	V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1kHz	1.0	3.0		mS
y <sub>os</sub>	Output admittance	V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1kHz		10		μS
C <sub>iss</sub>	Input capacitance	V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1MHz		8		pF
C <sub>rss</sub>	Feed back capacitance	V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1MHz		1.5		pF
R <sub>DS(ON)</sub>	Drain to source resistor	V <sub>DS</sub> =10mVrms(1kHz), V <sub>GS</sub> =0, I <sub>DSS</sub> =5mA		250		Ω

\* : It shows loss classification in right table.

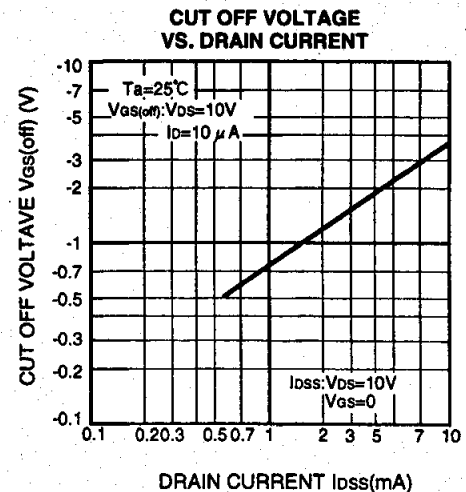
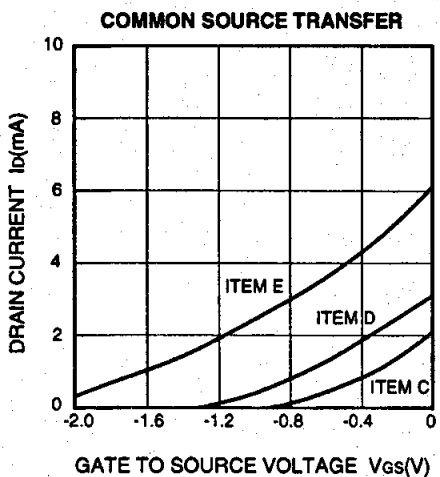
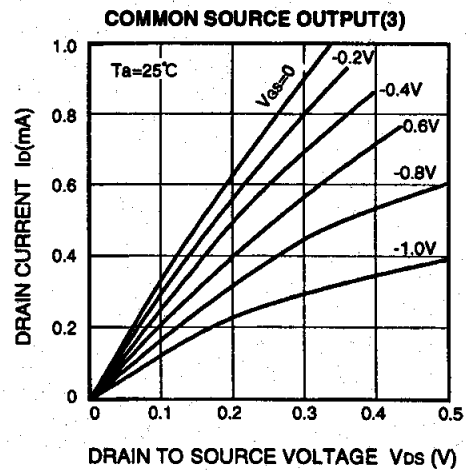
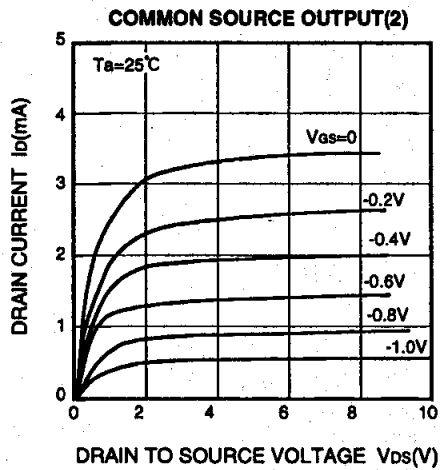
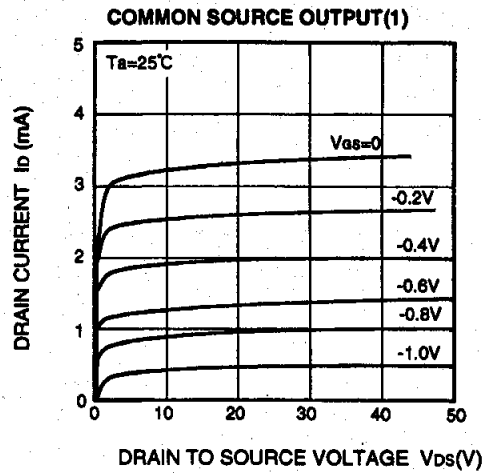
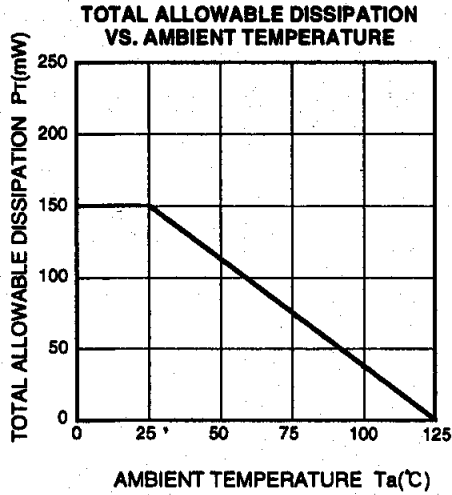
Item	B	C	D	E
I <sub>DSS</sub>	0.6 to 1.5	1.0 to 3.0	2.5 to 6.0	5.0 to 12



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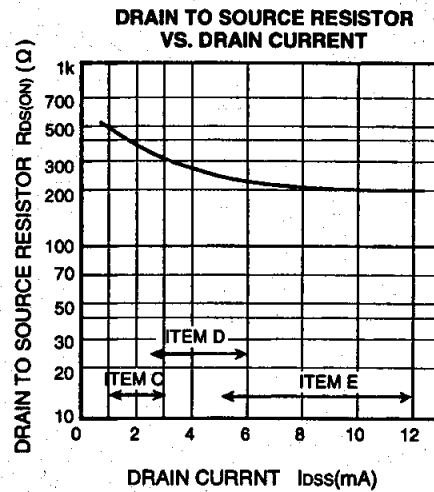
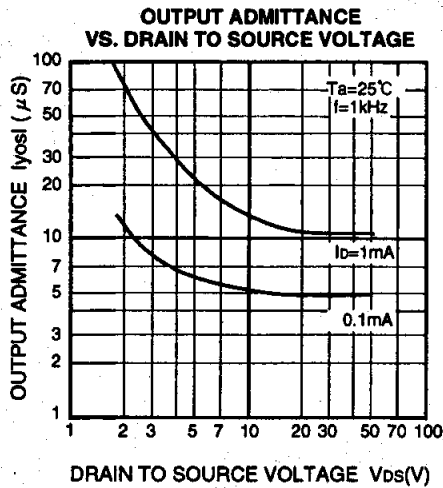
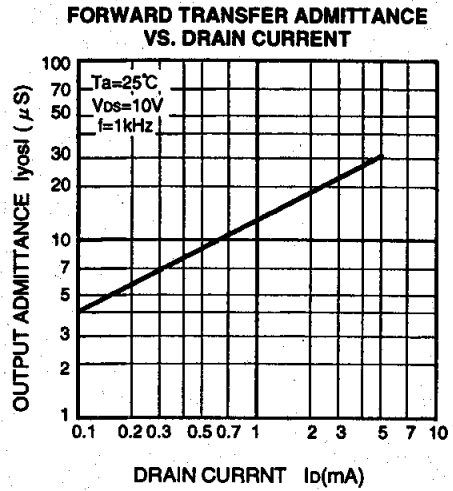
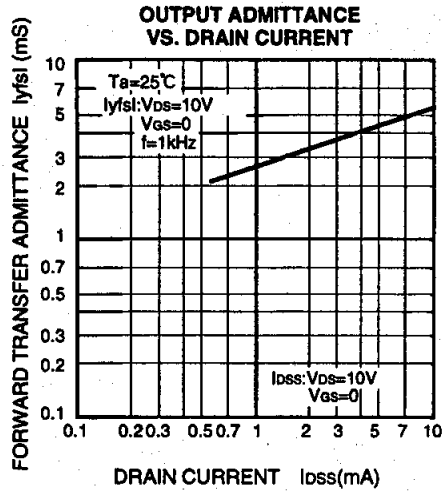
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**TYPICAL CHARACTERISTICS**



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**DRAIN TO SOURCE RESISTOR  $R_{ds(ON)}$  TEST CIRCUIT**

