

DESCRIPTION

2SK492 is a super mini outline resin sealed silicon N channel junction type FET. It is designed for low frequency voltage amplify,application and analog switch application.

FEATURE

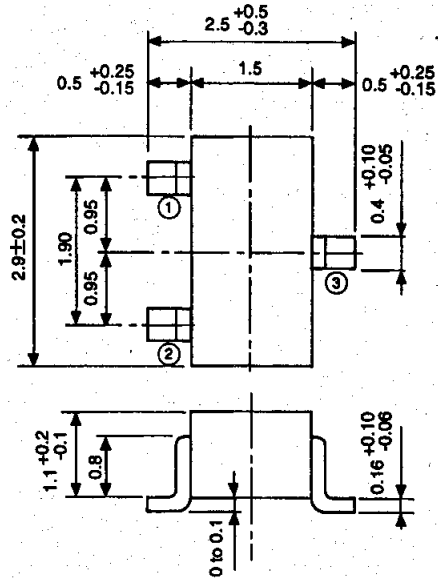
- Small type for mounting
- High $|y_{fs}|$ $|y_{fs}|=8\text{mS}(\text{typ})$
- Low $R_{DS(ON)}$ $R_{DS(ON)}=70\Omega$ typ

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

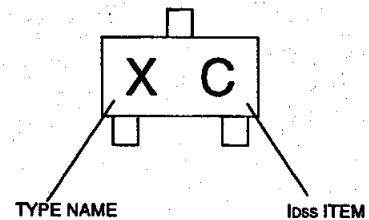
Note)

The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V _{GD0}	Gate to Drain voltage	-50	V
I _G	Gate current	10	mA
P _T	Total allowable dissipation(Ta=25°C)	150	mW
T _{ch}	Channel temperature	+125	°C
T _{stg}	Storage temperature	-55 to +125	°C

MARKING



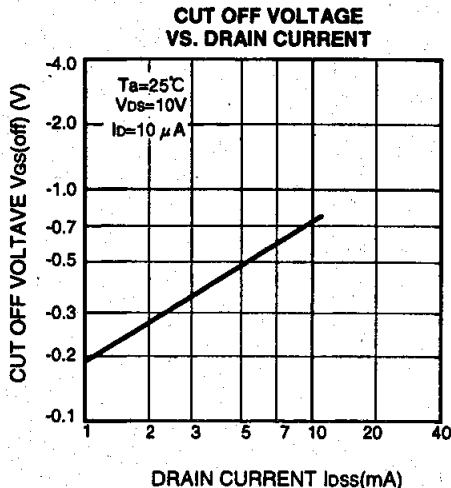
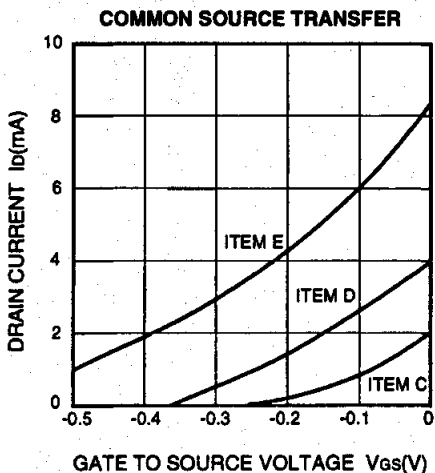
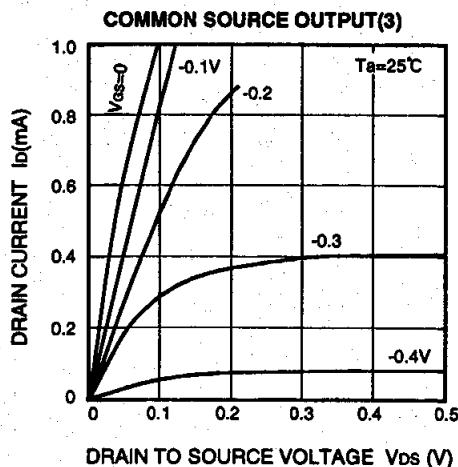
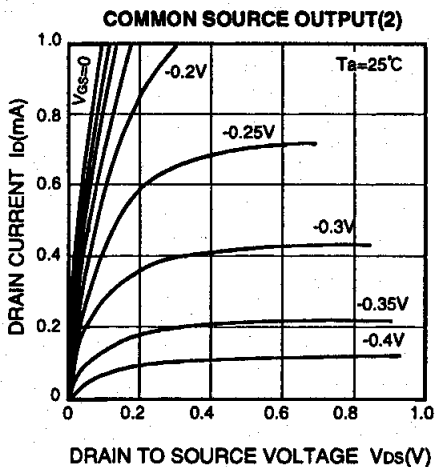
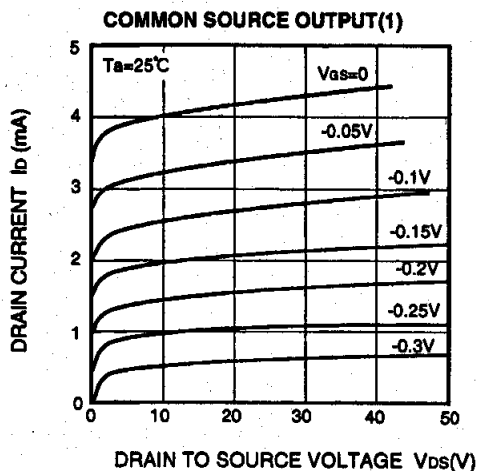
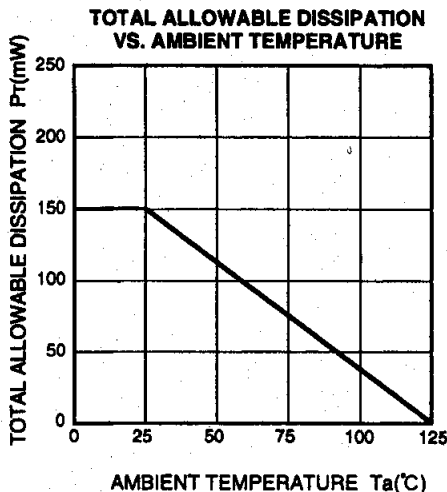
ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
I _{SS}	Gate leakage current	V _{GS} =-30V,V _{DS} =0			-1	nA
I _{DSS*}	Drain current	V _{DS} =10V,V _{GS} =0	1	4	12	mA
V _{GS(off)}	Cut off voltage	V _{DS} =10V,I _D =10 μA	-0.1		-2.0	V
y _{fs}	Forward transfer admittance	V _{DS} =10V,V _{GS} =0,f=1kHz	6.0	15		mS
y _{fs}	Forward transfer admittance	V _{DS} =10V,I _D =1mA,f=1kHz		8		mS
y _{os}	Output admittance	V _{DS} =10V,I _D =1mA,f=1kHz		10		μS
C _{iss}	Input capacitance	V _{DS} =10V,V _{GS} =0,f=1MHz		20		pF
NF	Noise figure	V _{DS} =10V,I _D =1mA,f=100Hz,R _G =1kΩ		1.0		dB
R _{DS(ON)}	Drain to source resistor	V _{DS} =10mVrms(1kHz),V _{GS} =0,I _{SS} =5mA		70		Ω

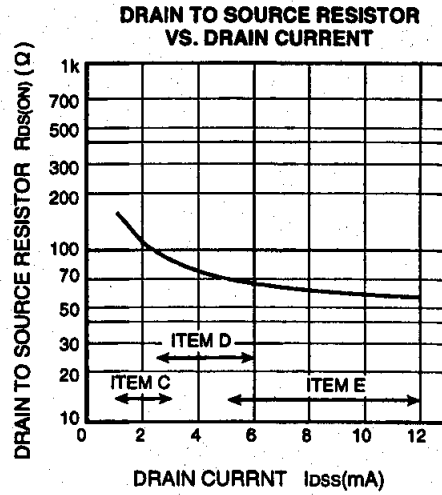
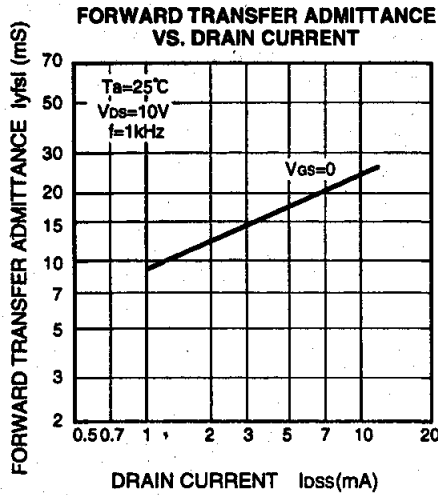
* : It shows I_{SS} classification in right table.

Item	C	D	E
I _{DSS}	1.0 to 3.0	2.5 to 6.0	5.0 to 12

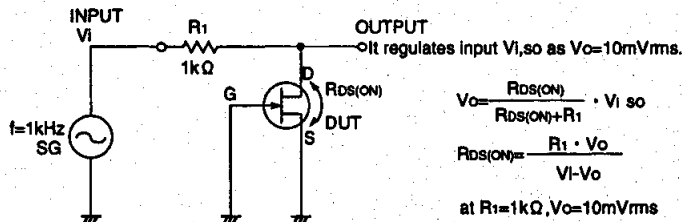
TYPICAL CHARACTERISTICS



**FOR LOW FREQUENCY AMPLIFY APPLICATION
N CHANNEL JUNCTION TYPE**



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



$$V_o = \frac{R_{ds(on)}}{R_{ds(on)} + R_1} \cdot V_i \text{ so}$$

$$R_{ds(on)} = \frac{R_1 \cdot V_o}{V_i - V_o}$$

at $R_1 = 1\text{k}\Omega, V_o = 10\text{mVrms}$

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