

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

DESCRIPTION

2SJ125 is a small type resin sealed P channel junction type FET. It is especially designed for low frequency voltage amplify, analog switch application.

FEATURE

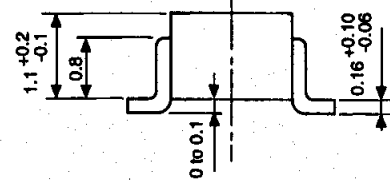
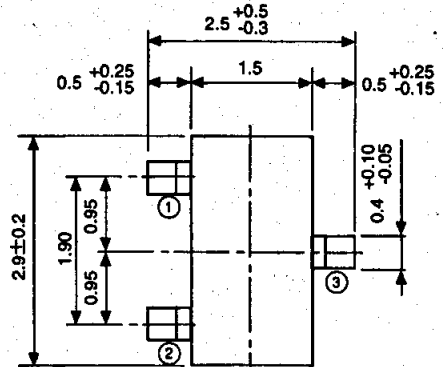
- Small type for mounting.
- High $|y_{fs}|$ $|y_{fs}| = 4\text{mS (typ)}$
- Low $R_{DS(ON)}$ $R_{DS(ON)} = 220 \Omega$

APPLICATION

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

OUTLINE DRAWING

Unit:mm



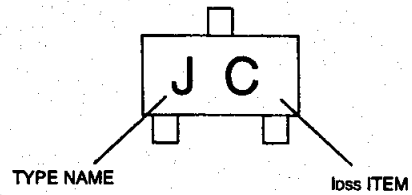
TERMINAL CONNECTOR

- 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 _{GDO}	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

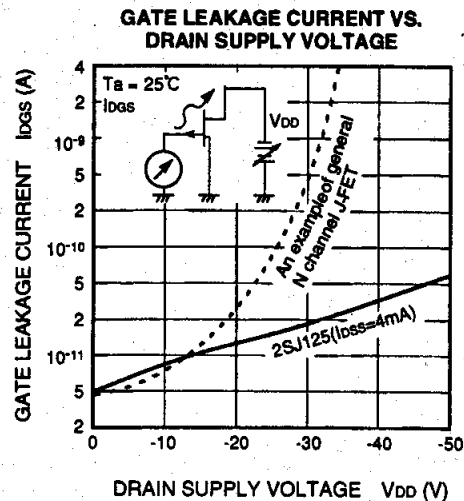
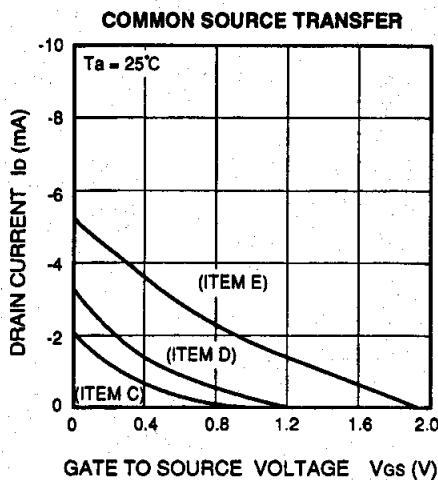
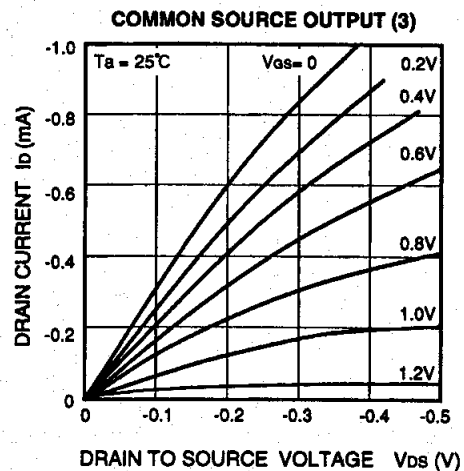
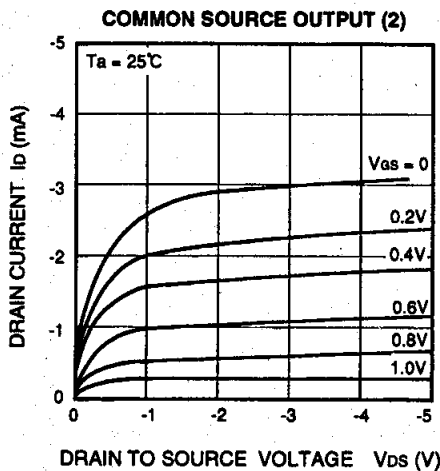
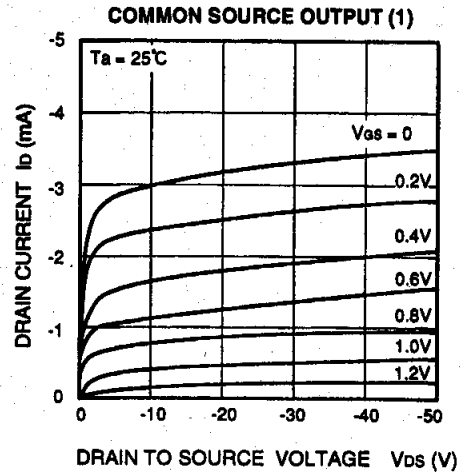
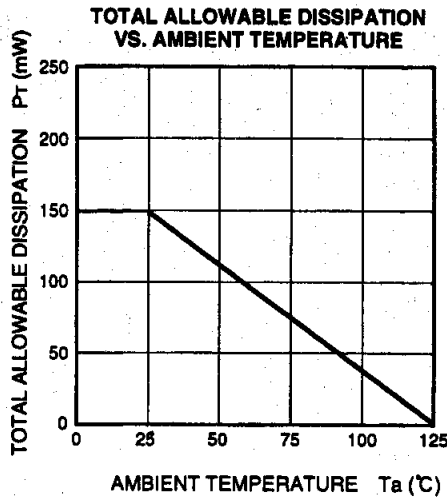
ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V _{(BR)GDO}	G to D break down voltage	I _G = 10 μA, I _S = 0	50			V
I _{GSS}	Gate leakage current	V _{GS} = 30V, V _{DS} = 0			1	nA
I _{DSS} *	Drain current	V _{DS} = -10V, V _{GS} = 0	-1.0	-4.0	-12	mA
V _{GS(off)}	Cut off voltage	V _{DS} = -10V, I _D = -10 μA	0.3	1.5	6.0	V
y _{fs}	Forward transfer admittance	V _{DS} = -10V, V _{GS} = 0, f = 1kHz	1.5	4.0		mS
C _{iss}	Input capacitance	V _{DS} = -10V, V _{GS} = 0, f = 1MHz		18		pF
R _{DS(ON)}	Drain to source resistor	V _{DS} = 10mVrms(1kHz), V _{GS} = 0, I _{DSS} = 5mA		220		Ω

* : It shows loss classification in right table.

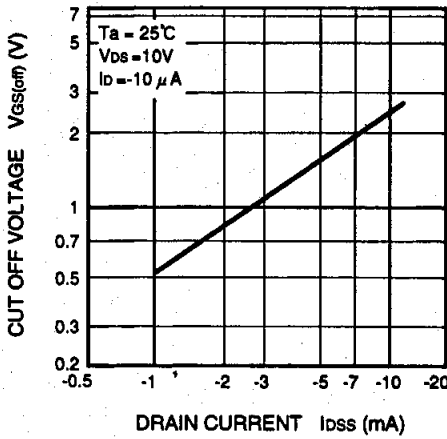
Item	C	D	E
I _{DSS} (mA)	1.0 to 3.0	2.5 to 6.0	5.0 to 12

TYPICAL CHARACTERISTICS

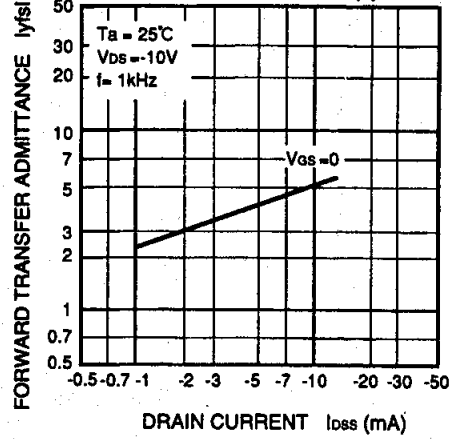


FOR LOW FREQUENCY AMPLIFY APPLICATION
P CHANNEL JUNCTION TYPE

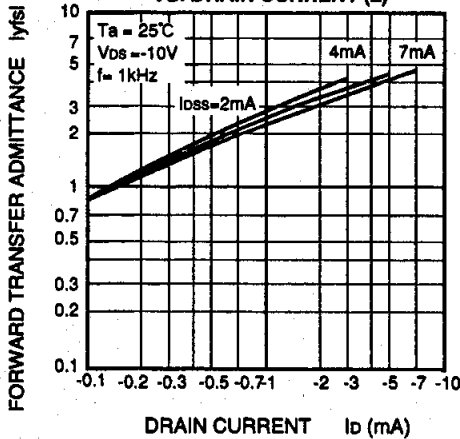
CUT OFF VOLTAGE VS. DRAIN CURRENT



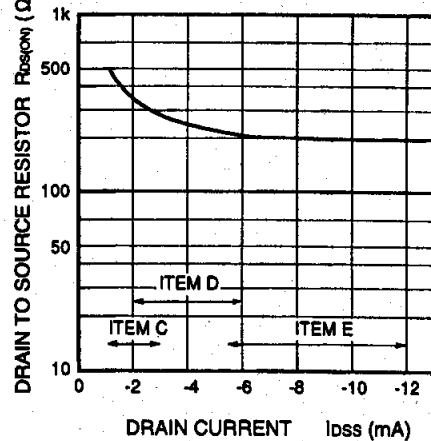
FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT (1)



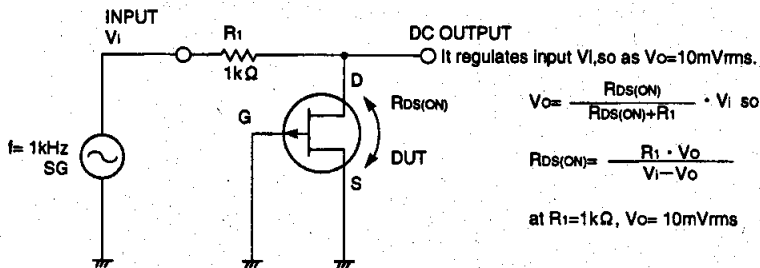
FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT (2)



DRAIN TO SOURCE RESISTOR VS. DRAIN CURRENT



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



The logo for IDC ISAHAYA ELECTRONICS CORPORATION. It features the letters 'IDC' in a stylized blue font with a red triangle above the 'I'. To the right of 'IDC', the words 'ISAHAYA ELECTRONICS CORPORATION' are written in a black, italicized, serif font.

<http://www.idc-com.co.jp>
6-41, TSUKUBA, ISAHAYA, NAGASAKI, 854-0065, JAPAN

Keep safety in your circuit designs !

Isahaya Electronics Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of non-flammable material or (iii) prevention against any malfunction or mishap.

Notes regarding these materials

·These materials are intended as reference to assist out customers in the selection of the Isahaya semiconductor product best suited to the customer's application, they do not convey any license under any intellectual property rights, or any other rights, belonging to Isahaya Electronics Corporation or a third party.
·Isahaya Electronics Corporation assumes no responsibility for any damage, or infringement of any third-party rights, originating in the use of any product data, diagrams, charts or circuit application examples contained in the materials.
·All information contained in these materials, including product data, diagrams and charts, represent information on products at the time of publication of these materials, and are subject to change by Isahaya Electronics Corporation without notice due to product improvements or other reasons. It is therefore recommended that customers contact Isahaya Electronics Corporation or authorized Isahaya Semiconductor product distributor for the latest product information before purchasing a product listed herein.
·The prior written approval of Isahaya Electronics Corporation is necessary to reprint or reproduce in whole or in part these materials.
·If these products or technologies are subject to the Japanese export control restrictions, they must be exported under a license from the Japanese government and cannot be imported into a country other than the approved destination. Any diversion or reexport contrary to the export control laws and regulations of Japan and/or the country of destination is prohibited.
·Please contact Isahaya Electronics Corporation or an authorized Isahaya Semiconductor product distributor for further details on these materials or the products contained therein.
