〈FIELD-EFFECT TRANSISTOR〉

2SJ498

FOR LOW FREQUENCY AMPLIFY APPLICATION
P CHANNEL JUNCTION TYPE MICRO

DESCRIPTION

2SJ498 is a small type resin sealed P channel junction type FET.
It is especially designed for low frequency voltage amplify, analog switch application.

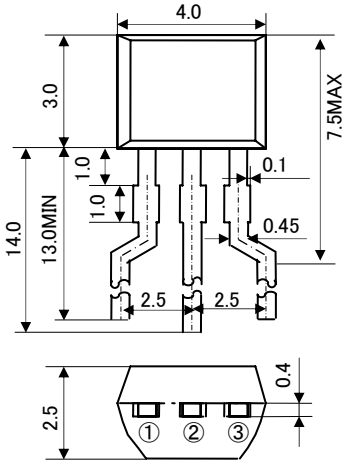
FEATURE

●High |yfs| | yfs | =4mS(typ)
●Low $R_{DS(ON)}$ $R_{DS(ON)}$=220Ω (typ)

APPLYCATION

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

OUTLINE DRAWING Unit : mm



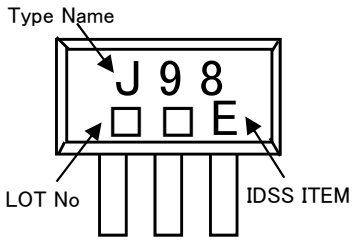
TERMINAL CONNECTOR
①:SOURCE
②:GATE
③:DRAIN

JEITA:-
JEDEC:-

MAXIMUN RATINGS(Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{GDO}	Gate to Drain voltage	50	V
I_G	Gate current	−10	mA
P_T	Total allowable dissipation	450	mW
Tch	Channel temperature	+150	℃
Tstg	Storage temperature	−55～+150	℃

MARKING



ELECTRICAL CHARACTERISTICS(Ta=25℃)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V(BR)GDO	Gate to Drain breakdown voltage	I_G=10μA, Is=0mA	50	−	−	V
IGSS	Gate leakage current	V_{GS}=30V, V_{DS}=0V	−	−	1	nA
IDSS ＊	Drain current	V_{DS}=−10V, V_{GS}=0V	−0.6	−4.0	−12	mA
$V_{GS(OFF)}$	Cut off voltage	V_{DS}=−10V, I_D=−10μA	0.2	1.5	6.0	V
| yfs |	Forward transfer admittance	V_{DS}=−10V, V_{GS}=0V, f=1kHz	1.5	4.0	−	mS
Ciss	Input capacitance	V_{DS}=−10V, V_{GS}=0V, f=1MHz	−	18	−	pF
RDS(ON)	Drain to Source resistor	V_{DS}=10mVrms(1kHz), V_{GS}=0V, I_{DSS}=5mA	−	220	−	Ω

＊ : It shows IDSS classification in right table.

ITEM	B	C	D	E
IDSS(mA)	0.6～1.5	1.0～3.0	2.5～6.0	5.0～12

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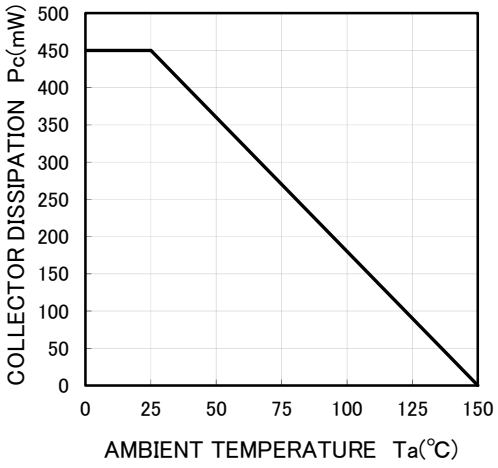
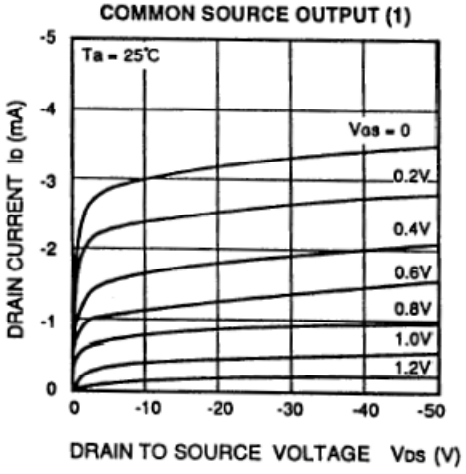
TYPICAL CHARACTERISTICS

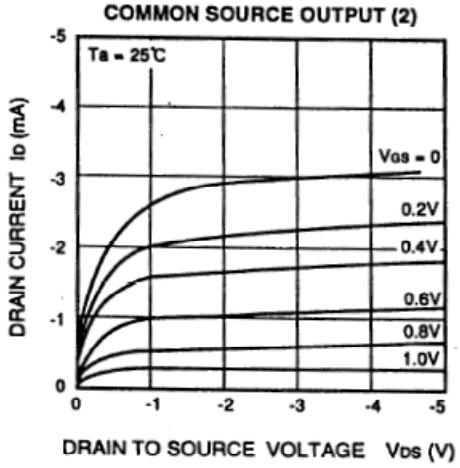
COLLECTOR DISSIPATION
VS AMBIENT TEMPERATURE



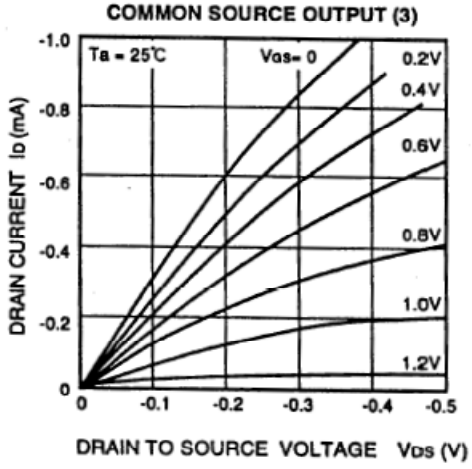
COMMON SOURCE OUTPUT (1)



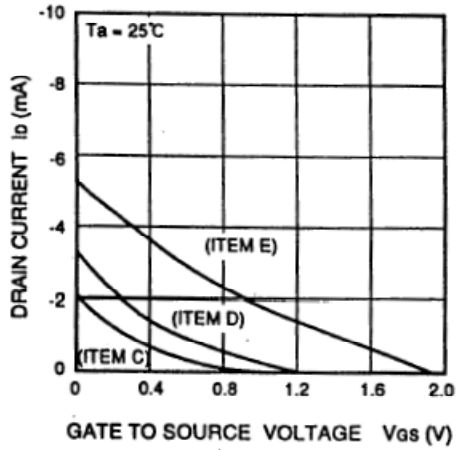
COMMON SOURCE OUTPUT (2)



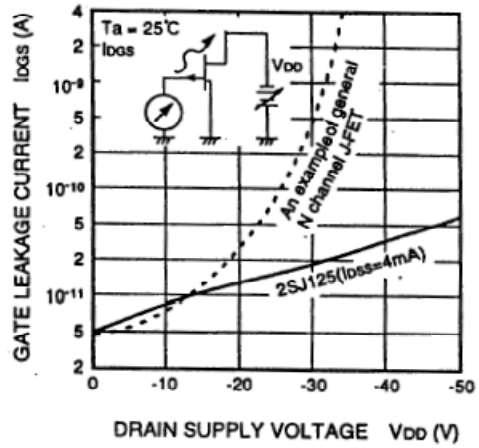
COMMON SOURCE OUTPUT (3)



COMMON SOURCE TRANSFER



GATE LEAKAGE CURRENT VS.
DRAIN SUPPLY VOLTAGE



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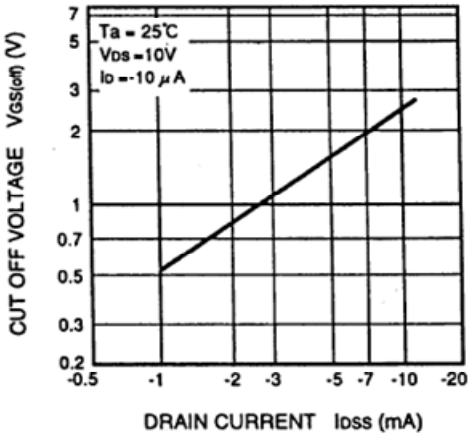
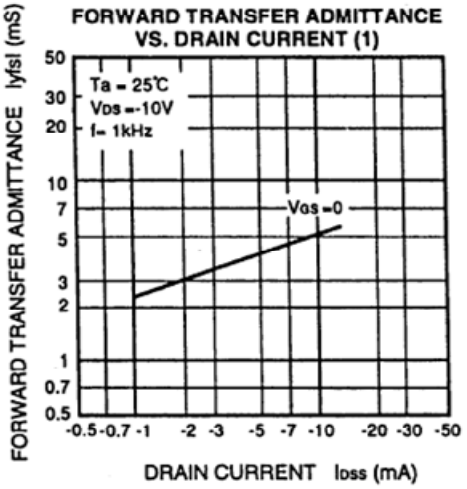
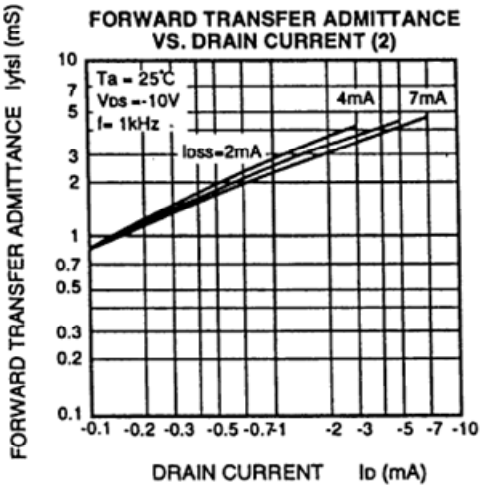
CUT OFF VOLTAGE VS. DRAIN CURRENT



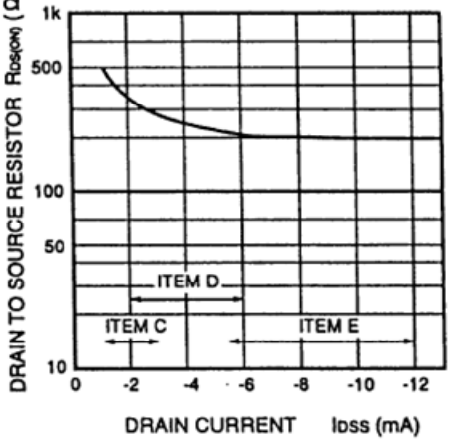
FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT (1)



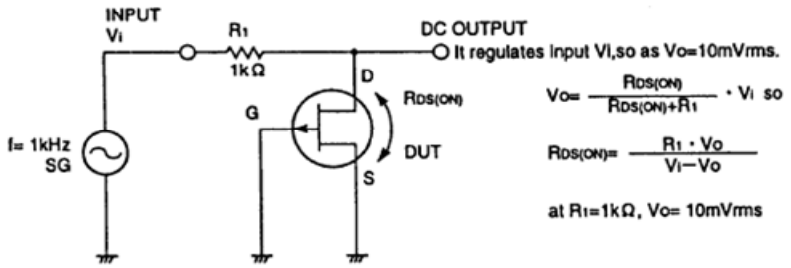
FORWARD TRANSFER ADMITTANCE VS. DRAIN CURRENT (2)



DRAIN TO SOURCE RESISTOR VS. DRAIN CURRENT



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



$$V_O = \frac{R_{DS(ON)}}{R_{DS(ON)}+R_1} \cdot V_i \text{ so}$$

$$R_{DS(ON)} = \frac{R_1 \cdot V_O}{V_i - V_O}$$

at R_1=1kΩ, V_O= 10mVrms

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