

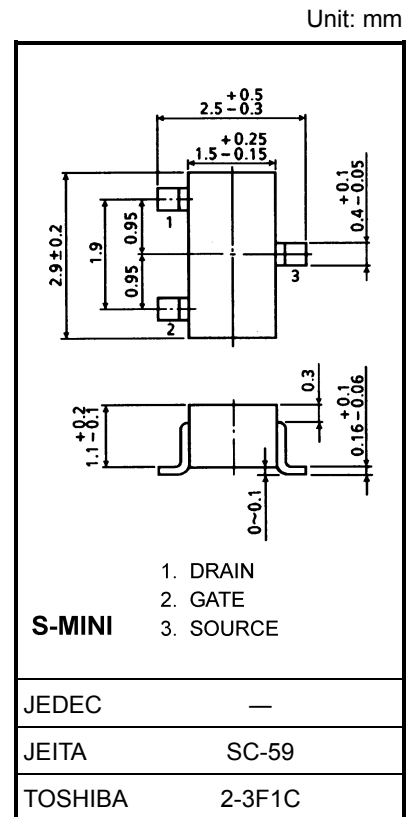
2SK211

FM Tuner Applications
VHF Band Amplifier Applications

- Low noise figure: NF = 2.5dB (typ.) (f = 100 MHz)
- High forward transfer admittance: |Y_{fs}| = 9 mS (typ.)
- Extremely low reverse transfer capacitance: C_{rss} = 0.1 pF (typ.)

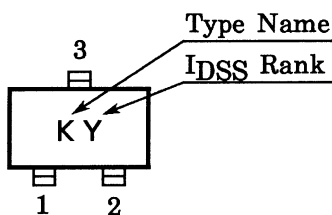
Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Gate-drain voltage	V _{GDO}	-18	V
Gate current	I _G	10	mA
Drain power dissipation	P _D	150	mW
Junction temperature	T _j	125	°C
Storage temperature range	T _{stg}	-55~125	°C



Weight: 0.012 g (typ.)

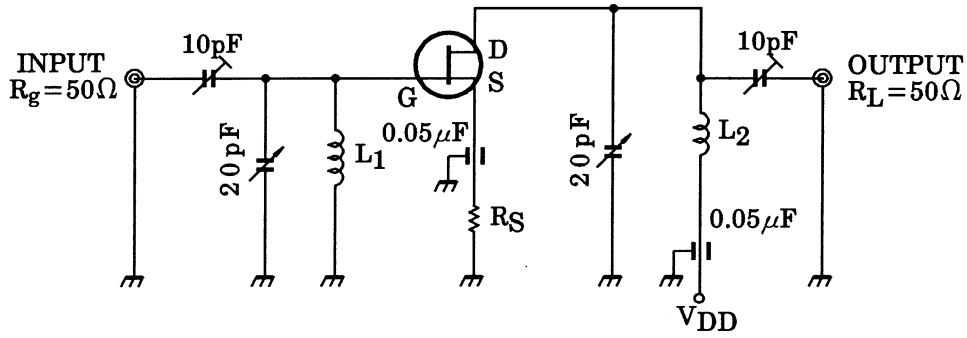
Marking



Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current	I _{GSS}	V _{GS} = -0.5 V, V _{DS} = 0 V	—	—	-10	nA
Gate-drain breakdown voltage	V (BR) GDO	I _G = -100 μA	-18	—	—	V
Drain current	I _{DSS} (Note)	V _{GS} = 0 V, V _{DS} = 10 V	1.0	—	10	mA
Gate-source cut-off voltage	V _{GS (OFF)}	V _{DS} = 10 V, I _D = 1 μA	-0.4	—	-4.0	V
Forward transfer admittance	Y _{fs}	V _{GS} = 0 V, V _{DS} = 10 V, f = 1 kHz	—	9	—	mS
Input capacitance	C _{iss}	V _{DS} = 10 V, V _{GS} = 0 V, f = 1 MHz	—	6.0	—	pF
Reverse transfer capacitance	C _{rss}	V _{GD} = -10 V, f = 1 MHz	—	0.10	0.15	pF
Power gain	G _{PS}	V _{DD} = 10 V, f = 100 MHz (Figure)	—	18	—	dB
Noise figure	NF	V _{DD} = 10 V, f = 100 MHz (Figure)	—	2.5	3.5	dB

Note: I_{DSS} classification O: 1.0~3.0 mA, Y: 2.5~6.0 mA, GR (G): 5.0~10.0 mA



L1: 0.8 mmφ Ag PLATED Cu WIRE 3 TURNS, 10 mm ID, 10 mm LENGTH

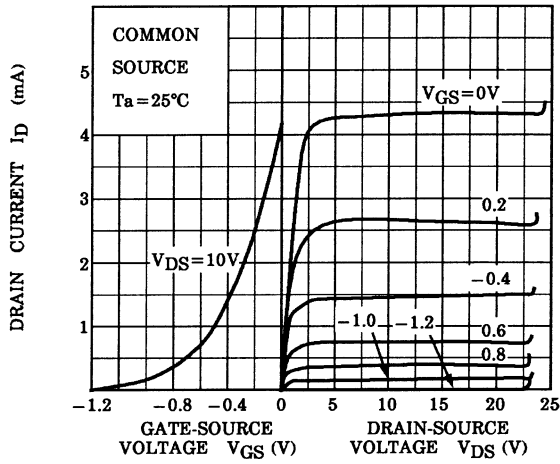
L2: 0.8 mmφ Ag PLATED Cu WIRE 3.5 TURNS, 10 mm ID, 10 mm LENGTH

Figure 100 MHz GpS, NF Test Circuit

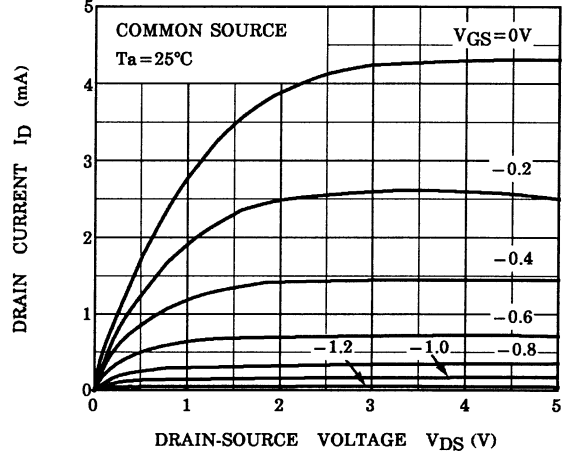
2SK211 is measured at each group by changing Rs.

Group	RS (Ω)
2SK211-O	0
2SK211-Y	18 Ω ± 5%
2SK211-GR	100 Ω ± 5%

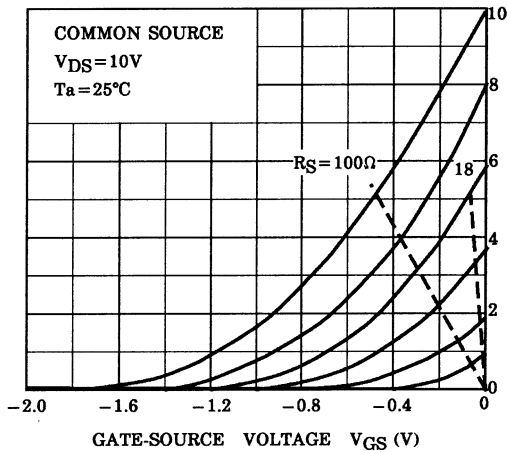
STATIC CHARACTERISTICS



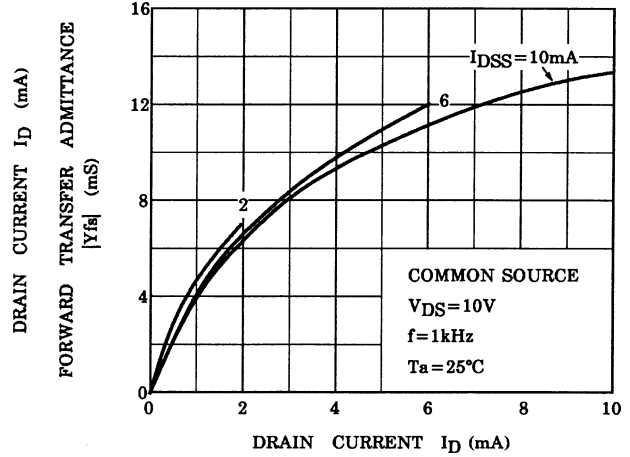
$I_D - V_{DS}$ (LOW VOLTAGE REGION)



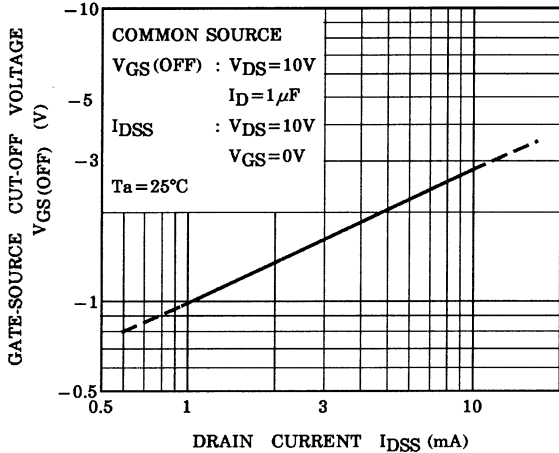
$I_D - V_{GS}$



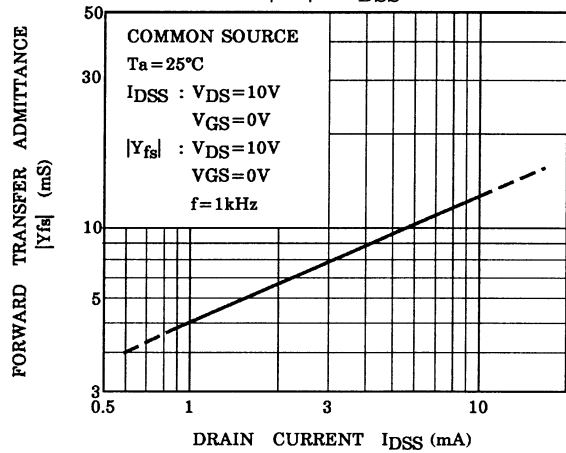
$|Y_{fs}| - I_D$

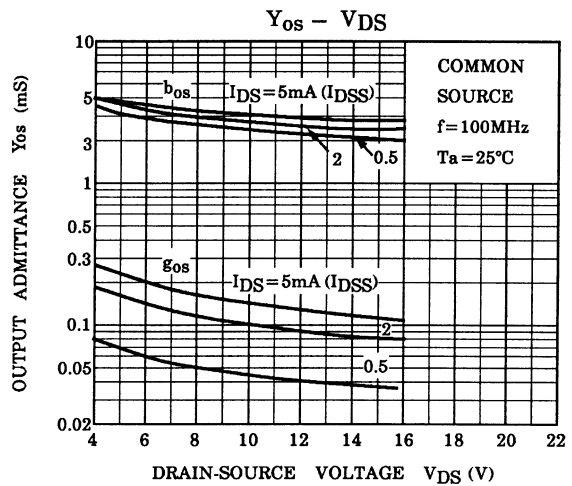
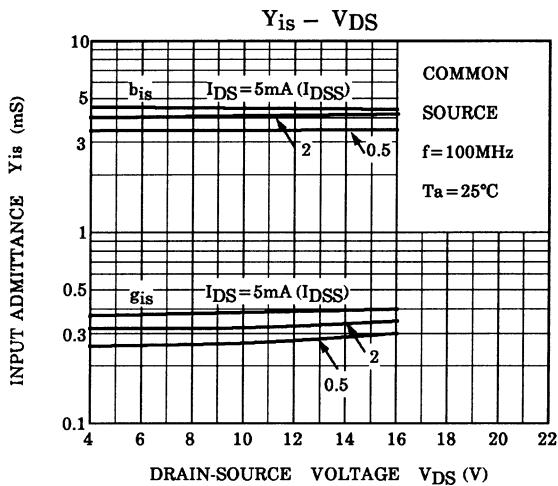
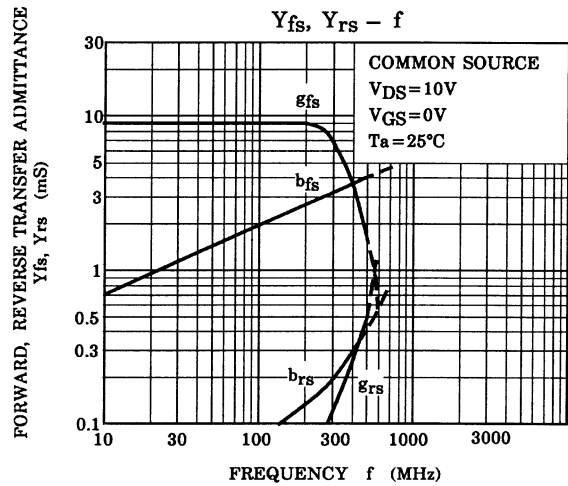
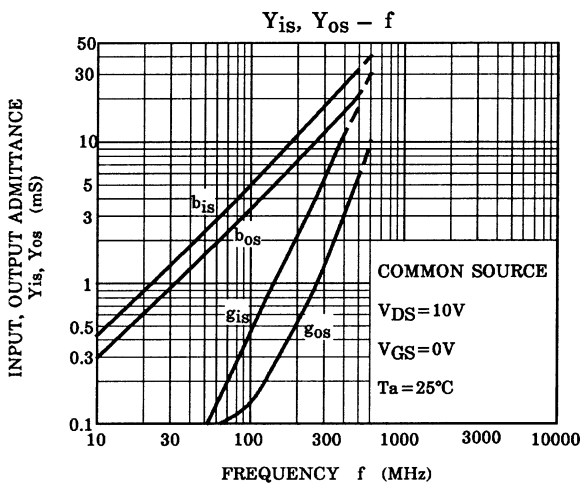
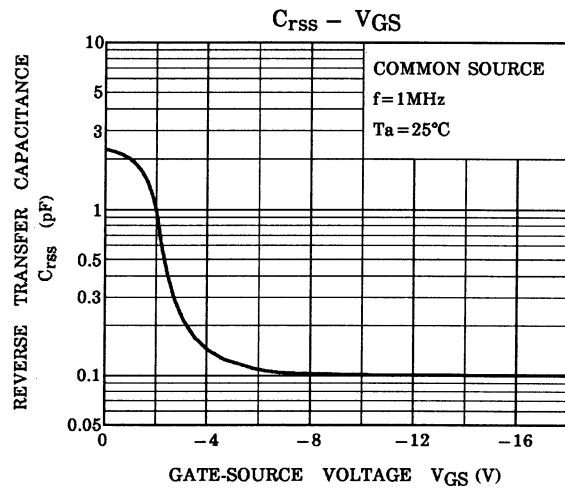
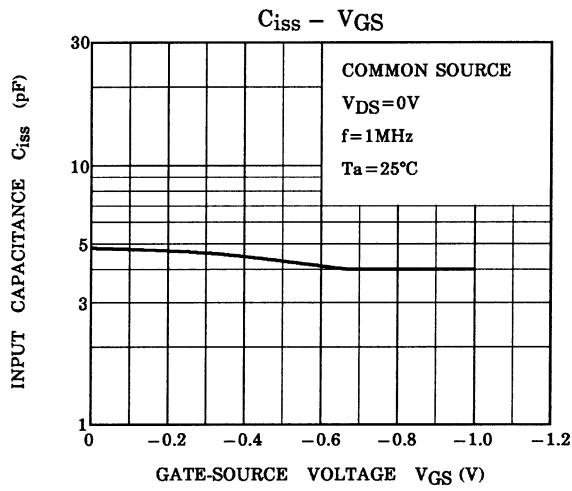


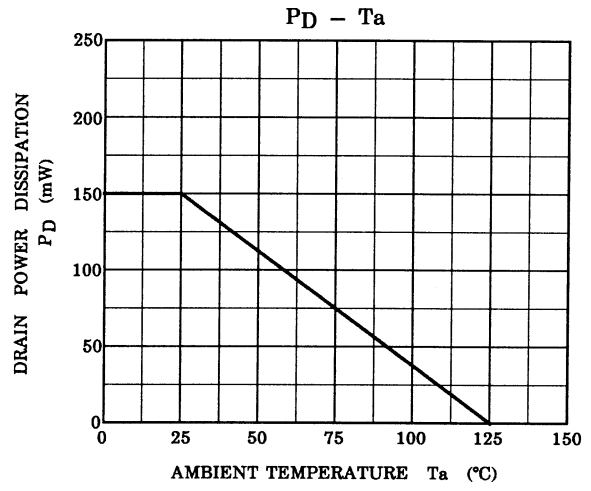
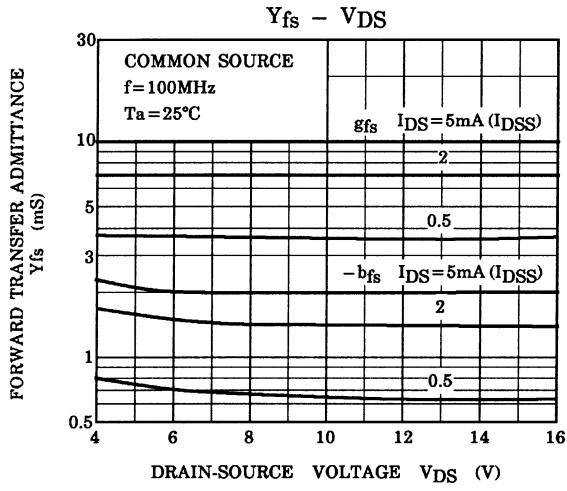
$V_{GS(OFF)} - I_{DSS}$



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







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