Unit: mm

TOSHIBA Field Effect Transistor Silicon N Channel MOS Type

2SK302

FM Tuner, VHF RF Amplifier Applications

• Low reverse transfer capacitance: $C_{rss} = 0.035 \text{ pF (typ.)}$

• Low noise figure: NF = 1.7dB (typ.)

• High power gain: $G_{ps} = 28dB$ (typ.)

• Recommend operation voltage: 5~15 V

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	20	V
Gate-source voltage	V _{GS}	±5	٧
Drain current	I _D	30	mA
Drain power dissipation	P _D	150	mW
Channel temperature	T _{ch}	125	°C
Storage temperature	T _{stg}	−55~125	°C

2.5 - 0.3 +0.25 1.5 - 0.15 1. DRAIN 2. GATE 3. SOURCE

2-3F1C

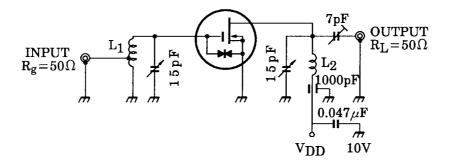
Weight: 0.012 g (typ.)

JEITA TOSHIBA

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Gate leakage current	I _{GSS}	$V_{DS} = 0 \text{ V}, V_{GS} = \pm 5 \text{ V}$	_	_	±50	nA
Drain-source voltage	V _{DSX}	$V_{GS} = -4 \text{ V}, I_D = 100 \mu\text{A}$	20	_	_	V
Drain current	I _{DSS} (Note)	V _{DS} = 10 V, V _{GS} = 0 V	1.5	_	14	mA
Gate-source cut-off voltage	V _{GS (OFF)}	$V_{DS} = 10 \text{ V}, I_D = 100 \mu\text{A}$	_	_	-2.5	V
Forward transfer admittance	Y _{fs}	$V_{DS} = 10 \text{ V}, V_{GS} = 0 \text{ V}, f = 1 \text{ kHz}$	_	10	_	mS
Input capacitance	C _{iss}	V 40.V V 0.V f 4.MU=	_	3.0	_	pF
Reverse transfer capacitance	C _{rss}	$V_{DS} = 10 \text{ V}, V_{GS} = 0 \text{ V}, f = 1 \text{ MHz}$	_	0.035	0.050	pF
Power gain	G _{PS}	V _{DS} = 10 V, V _{GS} = 0 V, f = 100 MHz (Figure 1)	_	28	_	dB
Noise figure	NF		_	1.7	3.0	dB

Note: I_{DSS} classification O: 1.5~3.5 mA, Y: 3.0~7.0 mA, GR: 6.0~14.0 mA

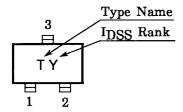


 $L_1{:}~1.0~mm\phi$ silver plated copper wire 4.0 T, 8 mm ϕ ID TAP at 1.0 T from coil end

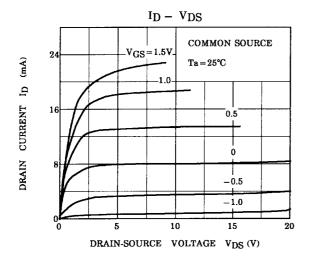
 L_2 : 1.0 mm ϕ silver plated copper wire 3.0 T, 8 mm ϕ ID, 10 mm length

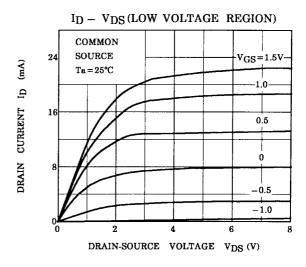
Figure 1 Gps, NF Test Circuit

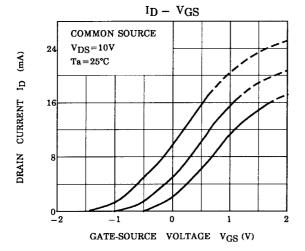
Marking

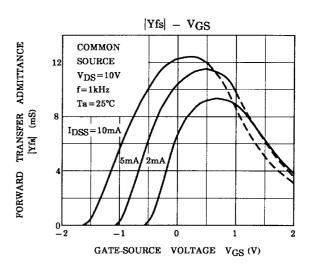


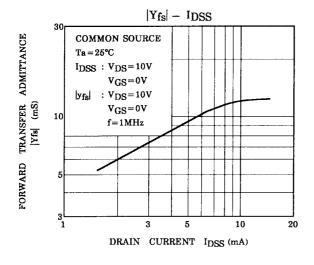
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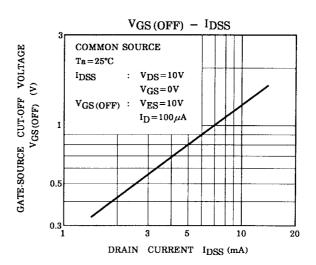


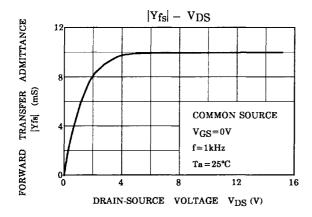


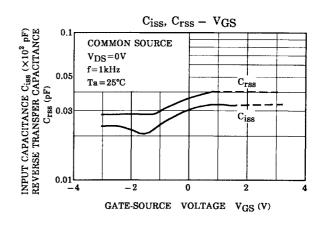


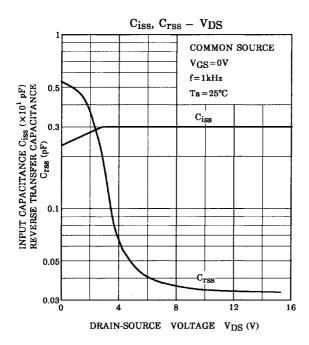


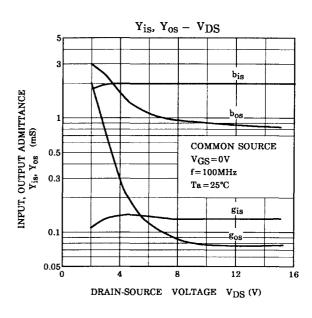


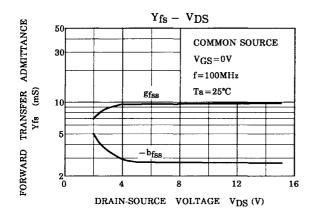


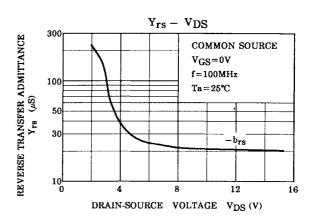


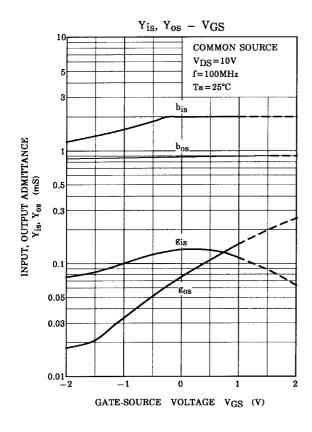


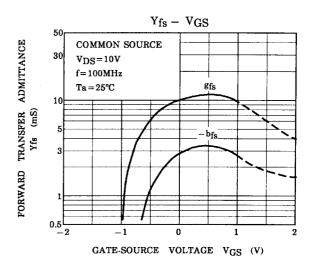


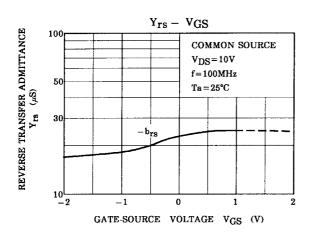


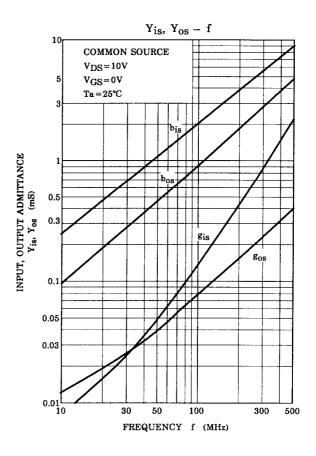




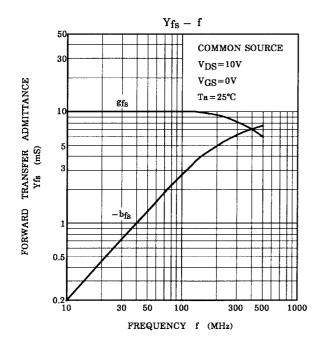


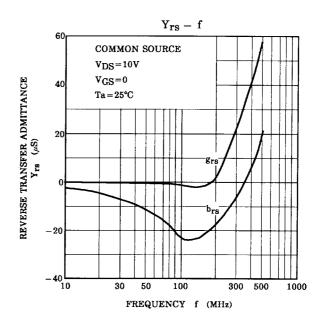


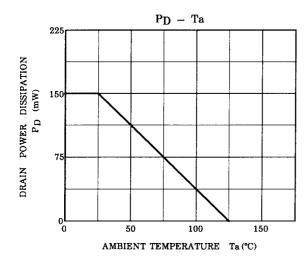




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