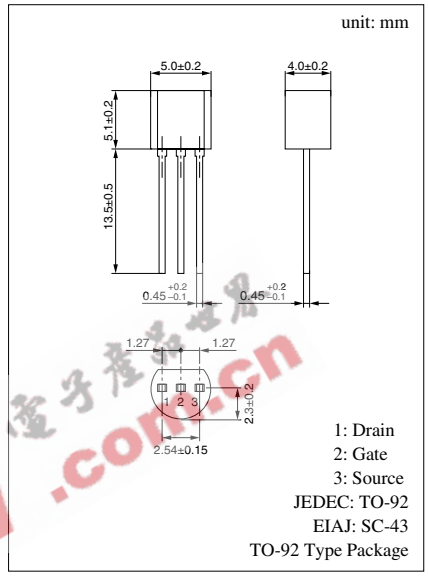
2SK0301 (2SK301)

Silicon N-Channel Junction FET

For low-frequency amplification
For switching



■ Features

- Low noies, high gain
- High gate to drain voltage V_{GDO}

■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Ratings	Unit
Drain to Source voltage	V_{DSX}	55	V
Gate to Drain voltage	V_{GDO}	−55	V
Gate to Source voltage	V_{GSO}	−55	V
Drain current	I_D	±30	mA
Gate current	I_G	10	mA
Allowable power dissipation	P_D	250	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

■ Electrical Characteristics (Ta = 25°C)

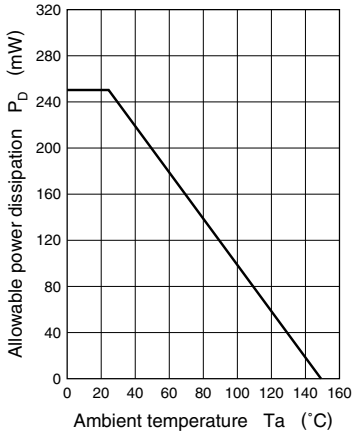
Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	I_{DSS} *	V_{DS} = 10V, V_{GS} = 0	1		20	mA
Gate to Source leakage current	I_{GSS}	V_{GS} = −30V, V_{DS} = 0			−10	nA
Gate to Drain voltage	V_{GDC}	I_G = −100µA, V_{DS} = 0	−55	−80		V
Gate to Source cut-off voltage	V_{GSC}	V_{DS} = 10V, I_D = 10µA			−5	V
Mutual conductance	g_m	V_{DS} = 10V, V_{GS} = 0, f = 1kHz	2.5	7.5		mS
Input capacitance (Common Source)	C_{iss}	V_{DS} = 10V, V_{GS} = 0, f = 1MHz		6.5		pF
Reverse transfer capacitance (Common Source)	C_{rss}			1.9		pF
Noise figure	NF	V_{DS} = 10V, V_{GS} = 0, R_g = 100kΩ f = 100Hz		0.5		dB

* I_{DSS} rank classification

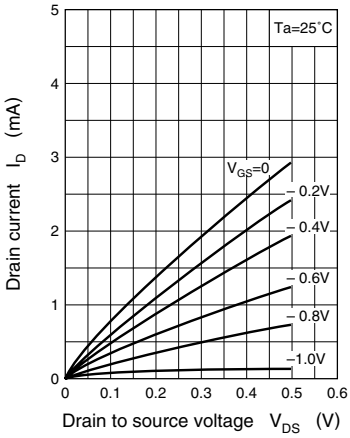
Runk	P	Q	R	S
I_{DSS} (mA)	1 to 3	2 to 6.5	5 to 12	10 to 20

Note) The part number in the parenthesis shows conventional part number.

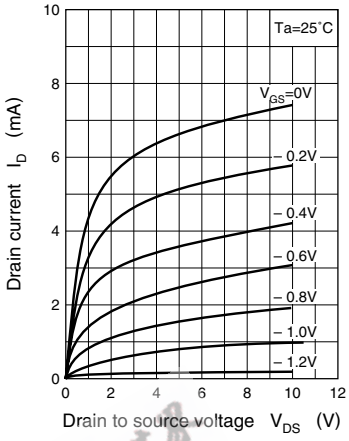
P_D — Ta



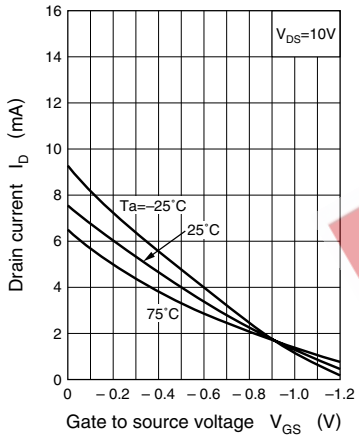
I_D — V_{DS}



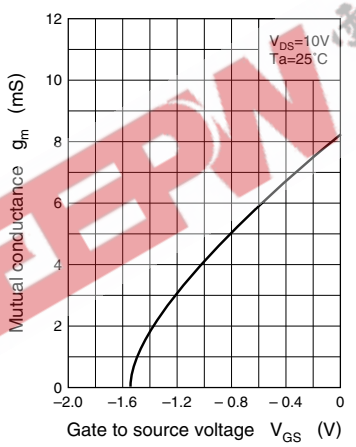
I_D — V_{DS}



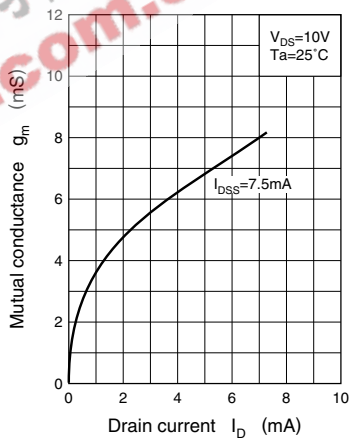
I_D — V_{GS}



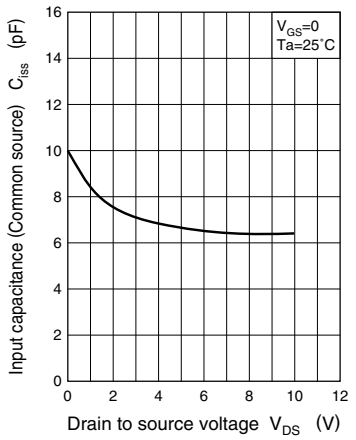
g_m — V_{GS}



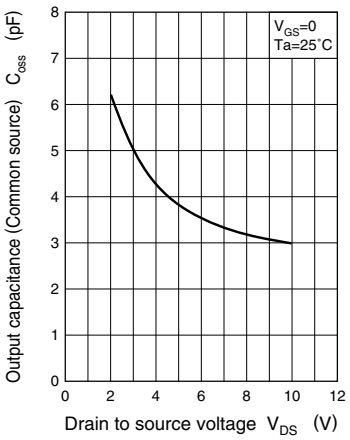
g_m — I_D



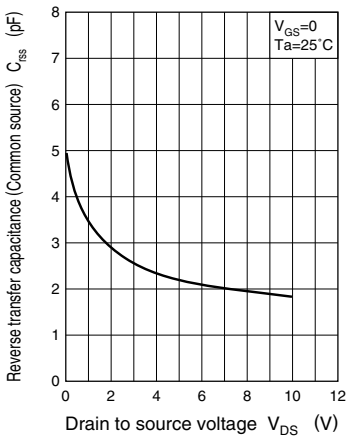
C_{iss} — V_{DS}



C_{oss} — V_{DS}



C_{rss} — V_{DS}



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