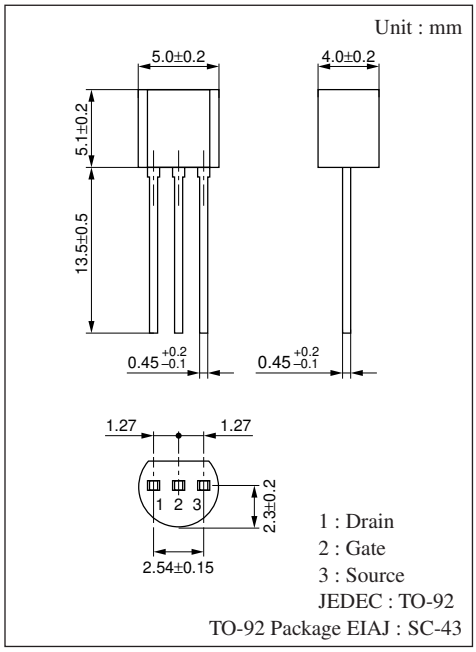
2SK301

Silicon N-Channel Junction

For low-frequency amplification
For switching



■ Features

- Low noise, high gain
- High gate-drain voltage VGDO

■ Absolute Maximum Ratings (Ta = 25˚C)

Parameter	Symbol	Rating	Unit
Drain-Source voltage	V_{DSX}	55	V
Gate-Drain voltage	V_{GDO}	– 55	V
Gate-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

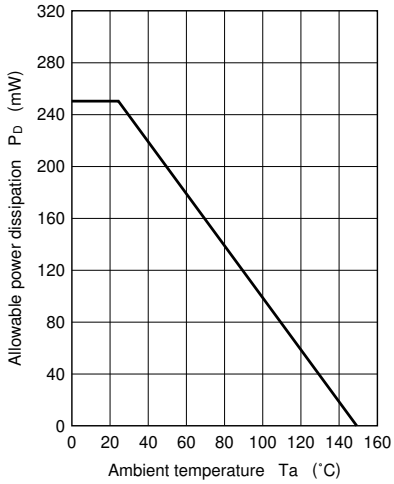
■ Electrical Characteristics (Ta = 25˚C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS} *	V_{DS}=10V, V_{GS}= 0	1		12	mA
Gate-Source leakage current	I_{GSS}	V_{GS}= –30V, V_{DS}= 0			–10	nA
Gate-Drain voltage	V_{GDS}	I_G= –100µA, V_{DS}= 0	– 55	– 80		V
Gate-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	C_{iss}	V_{DS}=10V, V_{GS}= 0, f=1MHz		6.5		pF
Feedback capacitance	C_{rss}			1.9		pF
Noise voltage	NF	V_{DS}=10V, V_{GS}= 0, R_g=100kΩ, f=100Hz		0.5		dB

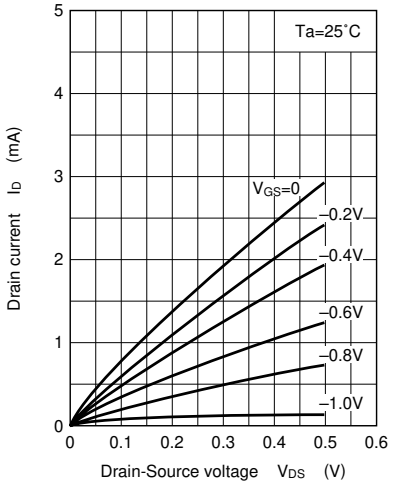
* I_{DSS} rank classification

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

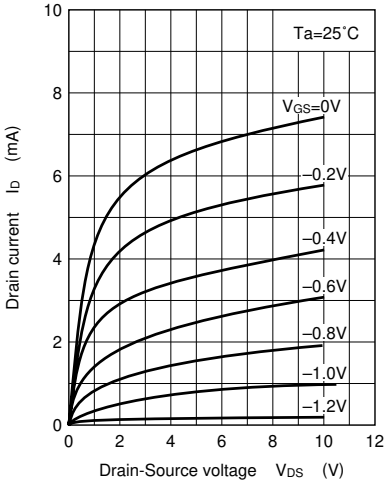
$P_D - Ta$



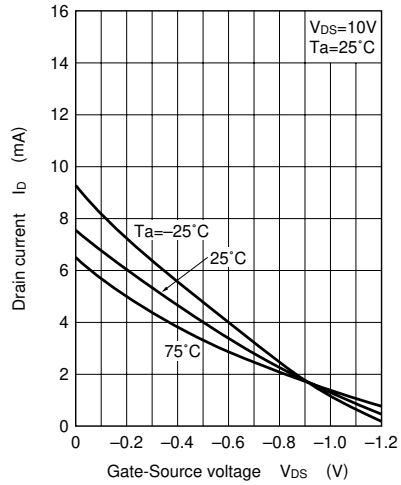
$I_D - V_{DS}$



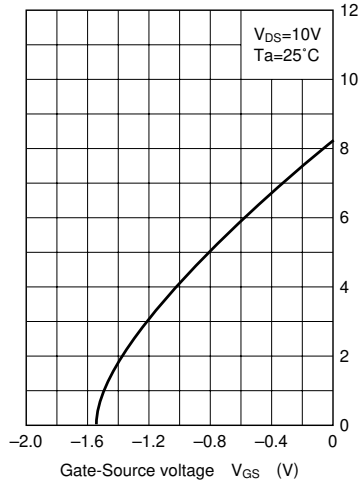
$I_D - V_{DS}$



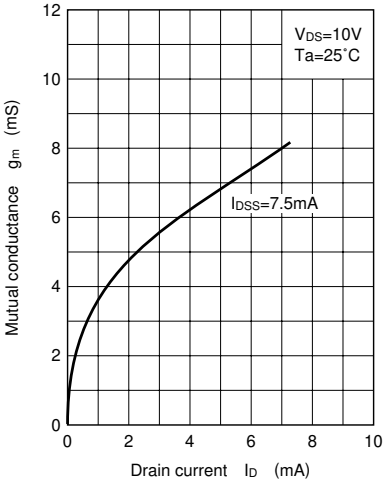
$I_D - V_{GS}$



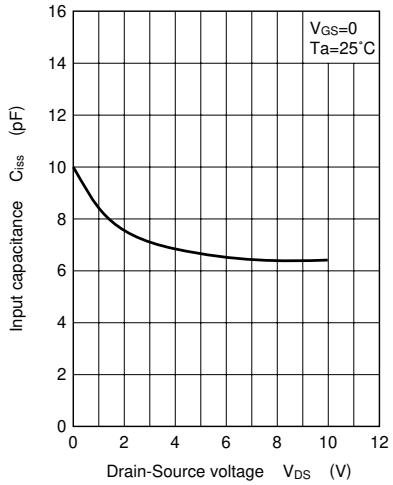
$g_m - V_{GS}$



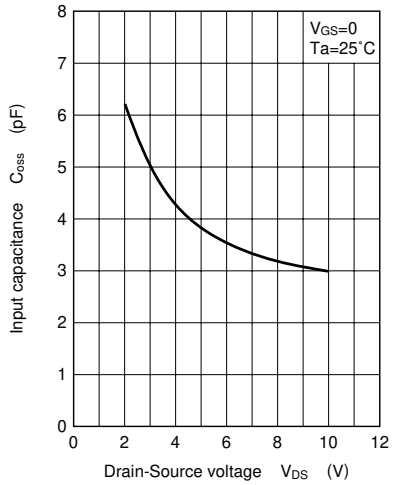
$g_m - I_D$



$C_{rss} - V_{DS}$



$C_{oss} - V_{DS}$



$C_{rss} - V_{DS}$