



QNHCHIP

2SK30A

Product Specification

2SK30A

Silicon N-Channel Junction FET



Description

This product is N-Channel Junction FET designed for high current switching applications.

FEATURES

High breakdown voltage: $V_{GDS} = -50\text{ V}$

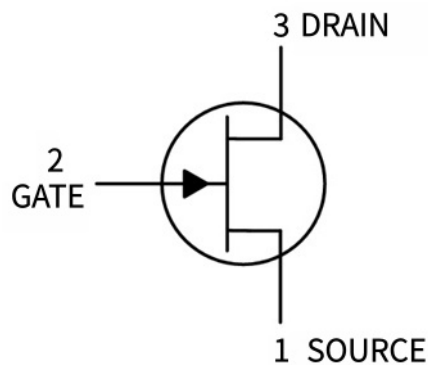
High input impedance: $I_{GSS} = -1\text{ nA (max)}$ ($V_{GS} = -30\text{ V}$)

Low noise: $NF = 0.5\text{ dB (typ.)}$ ($V_{DS} = 15\text{ V}$, $V_{GS} = 0$, $R_G = 100\text{ k}\Omega$, $f = 120\text{ Hz}$)

Applications

- Impedance conversion
- pyroelectric sensor
- tone control amplifiers
- constant current
- audio frequency low noise amplifiers
- Acceleration sensor

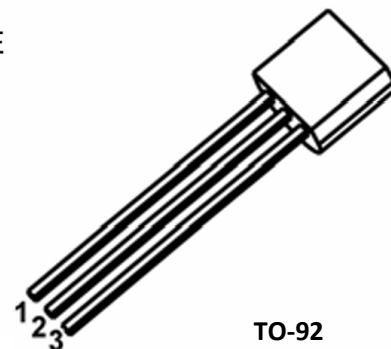
Pin Assignments



1. SOURCE

2. GATE

3. DRAIN



TO-92

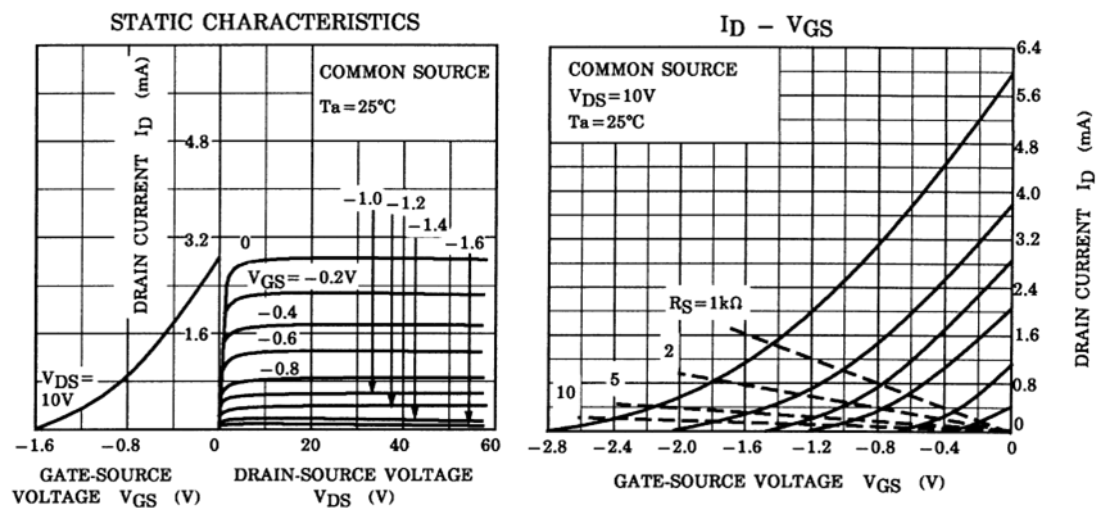
Absolute Maximum Ratings ($T_A=25^\circ\text{C}$)

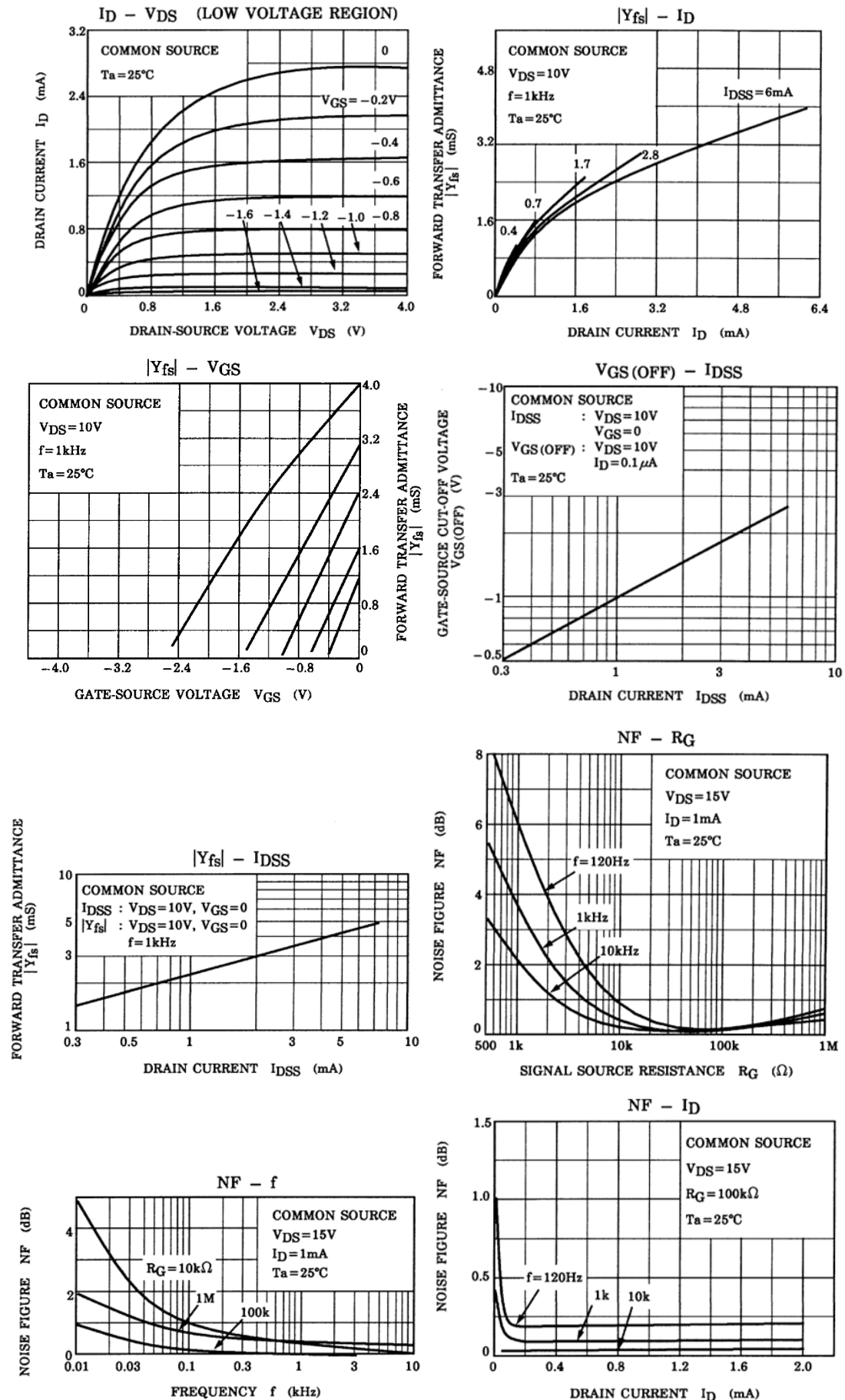
Characteristics	Symbol	Rating	Unit
Gate-drain voltage	V_{GDS}	-50	V
Gate current	I_G	10	mA
Drain power dissipation	P_D	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~125	$^\circ\text{C}$

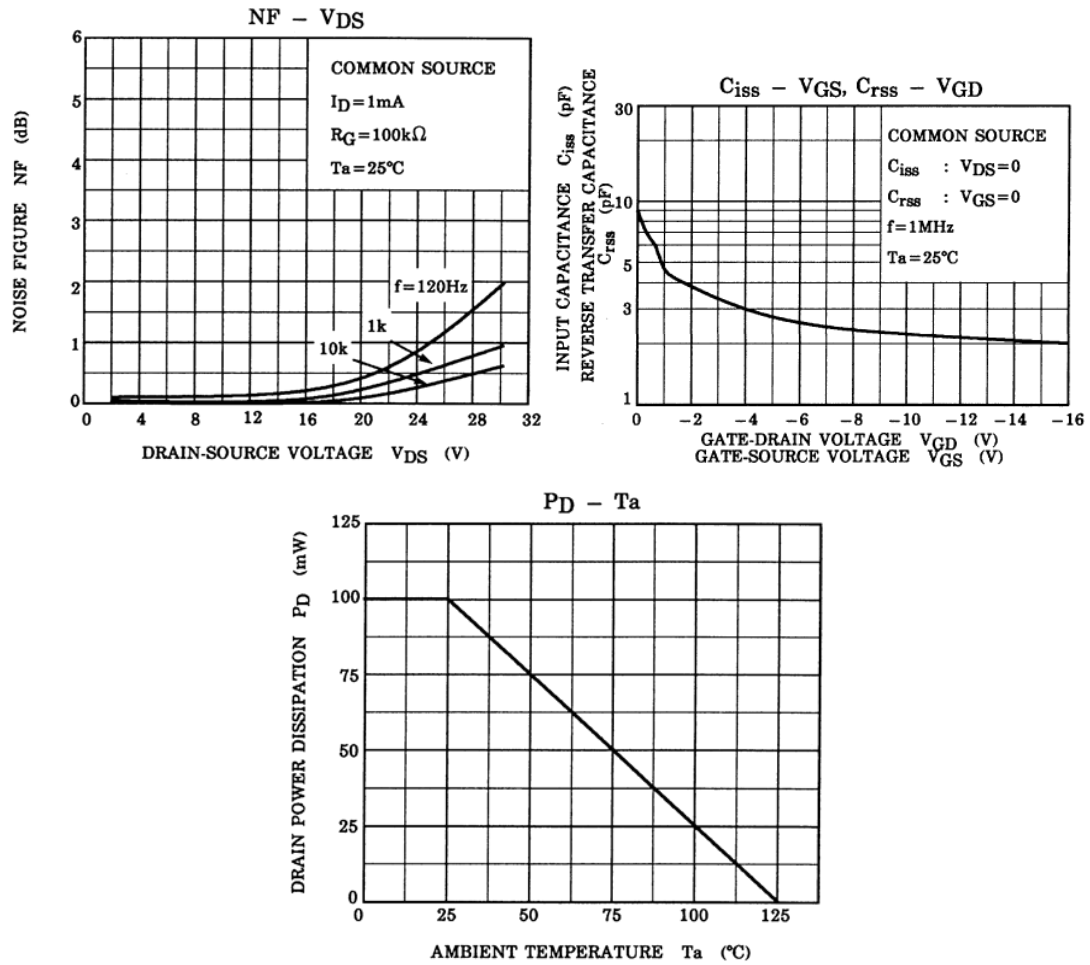
**Electrical Characteristics ($T_A=25^\circ\text{C}$)**

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Gate cut-off current	I_{GSS}	$V_{GS}=-30\text{ V}$, $V_{DS}=0$	-	-	-1.0	nA
Gate-drain breakdown voltage	$V_{(BR)GDS}$	$V_{DS}=0$, $I_G=-100\mu\text{A}$	-50	-	-	V
Drain current	$I_{DSS}^{(Note)}$	$V_{DS}=10\text{ V}$, $V_{GS}=0$	0.3	-	6.5	mA
Gate-source cut-off voltage	$V_{GS(OFF)}$	$V_{DS}=10\text{ V}$, $I_D=0.1\mu\text{A}$	-0.4	-	-5.0	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS}=10\text{ V}$, $V_{GS}=0$, $f=1\text{ kHz}$	1.2	-	-	mS
Input capacitance	C_{iss}	$V_{GS}=0$, $V_{DS}=0$, $f=1\text{ MHz}$	-	8.2	-	pF
Reverse transfer capacitance	C_{rss}	$V_{GD}=-10\text{ V}$, $V_{DS}=0$, $f=1\text{ MHz}$	-	2.6	-	pF
Noise figure	NF	$V_{DS}=15\text{ V}$, $V_{GS}=0$ $R_G=100\text{ k}\Omega$, $f=120\text{ Hz}$	-	0.5	5.0	dB

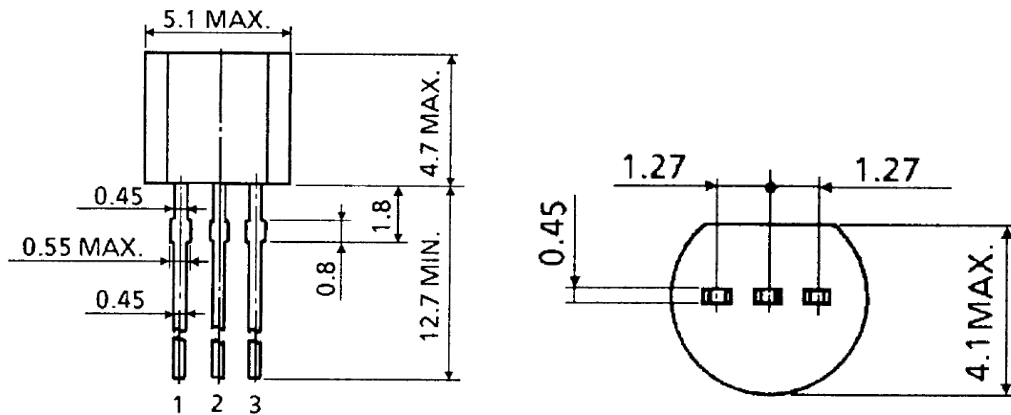
Note:

 I_{DSS} classification: (1)Y:1.20~3.00; (2)GR: 2.60~6.50.**Operating Characteristics**





Package Outline



1.SOURCE 2.GATE 3.DRAIN

Ordering information

Order Code	Marking	I_{DSS} (mA)	Package
2SK30A-Y	K30Y	1.20~3.00	TO-92
2SK30A-GR	K30GR	2.60~6.50	TO-92