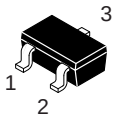
N-Channel JFET

15 V, 10 to 24 mA, 50 mS, CP

2SK932



1: Source
2: Drain
3: Gate

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Applications

- AM Tuner RF Amplification, Low Noise Amplifier

Features

- Adoption of FBET Process
- Large | yfs |
- Small Ciss
- Ultralow Noise Figure
- Ultrasmall−sized Package Permitting 2SK932−applied Sets to be Made Smaller and Slimer
- These are Pb−Free Devices

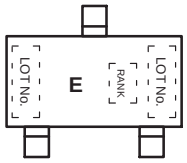
Specifications

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C)

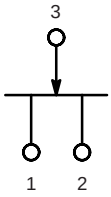
Parameter	Symbol	Conditions	Ratings	Unit
Drain−to−Source Voltage	V_{DSX}		15	V
Gate−to−Drain Voltage	V_{GDS}		−15	V
Gate Current	I_G		10	mA
Drain Current	I_D		50	mA
Allowable Power Dissipation	P_D		200	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

MARKING DIAGRAM



ELECTRICAL CONNECTION



ORDERING INFORMATION

Device	Package	Shipping†
2SK932−23−TB−E	CP (Pb−Free)	3,000 / Tape & Reel
2SK932−24−TB−E	CP (Pb−Free)	3,000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Gate−to−Drain Breakdown Voltage	$V_{(BR)GDS}$	I_G = −10 μA, V_{DS} = 0 V	−15	−	−	V
Gate−to−Source Leakage Current	I_{GSS}	V_{GS}= −10 V, V_{DS} = 0 V	−	−	−1.0	nA
Zero−Gate Voltage Drain Current	I_{DSS}	V_{DS}= −5 V, V_{GS} = 0 V	10.0*	−	24.0*	mA
Cutoff Voltage	V_{GS}(off)	V_{DS} = 5 V, I_D = 100 μA	−0.2	−0.6	−1.4	V
Forward Transfer Admittance	| yfs |	V_{DS} = 5 V, V_{GS} = 0 V, f = 1 kHz	25	50	−	mS
Input Capacitance	Ciss	V_{DS} = 5 V, V_{GS} = 0 V, f = 1 MHz	−	10	−	pF
Reverse Transfer Capacitance	Crss		−	3.0	−	pF
Noise Figure	NF	V_{DS} = 5 V, R_g = 1 kΩ, I_D = 1 mA, f = 1 kHz	−	1.5	−	dB

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

*The 2SK932 is classified by I_{DSS} as follows: (unit: mA)

Rank	23	24
I_{DSS}	10.0 to 17.0	14.5 to 24.0

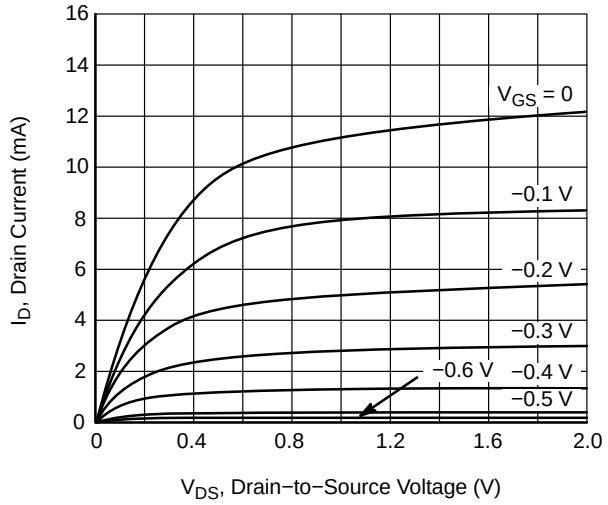


Figure 1. $I_D - V_{DS}$

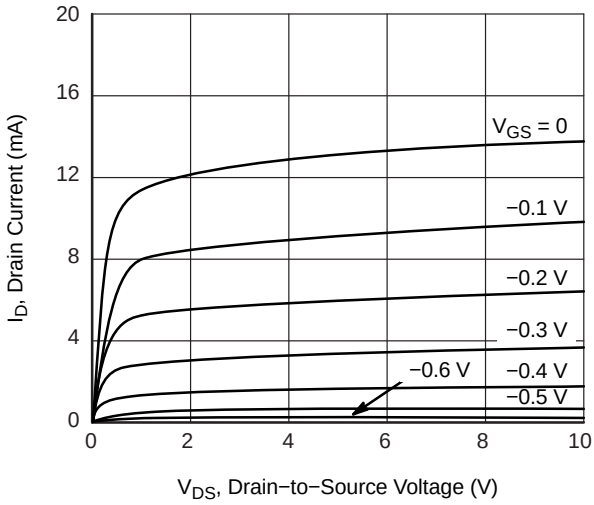


Figure 2. $I_D - V_{DS}$

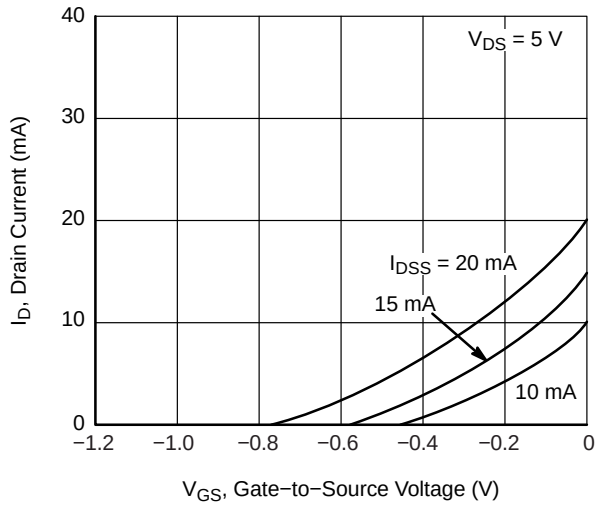


Figure 3. $I_D - V_{GS}$

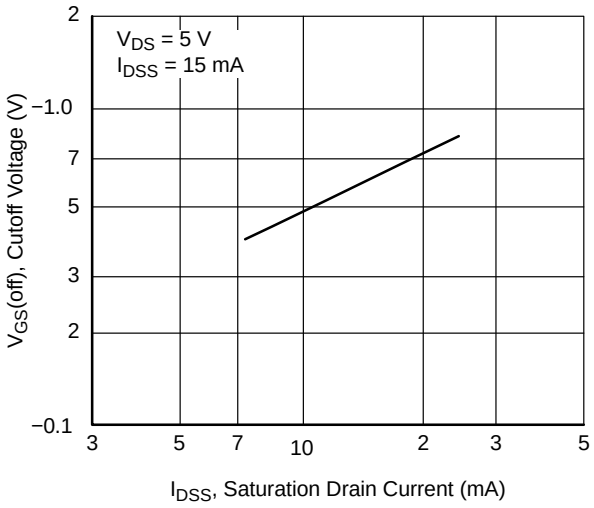


Figure 4. V_{GS}(off) − I_{DSS}

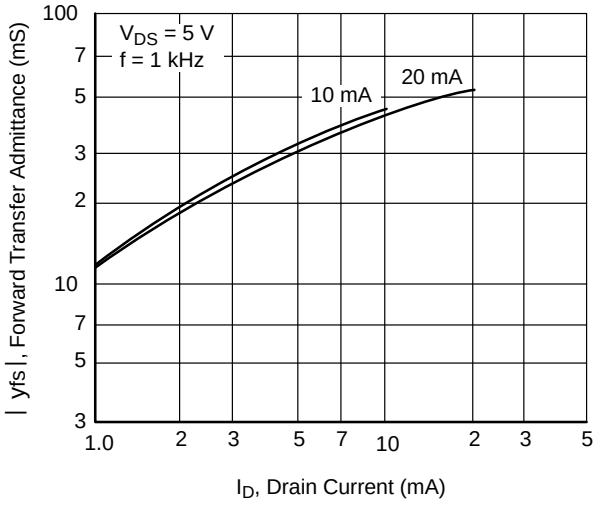


Figure 5. | yfs | − I_D

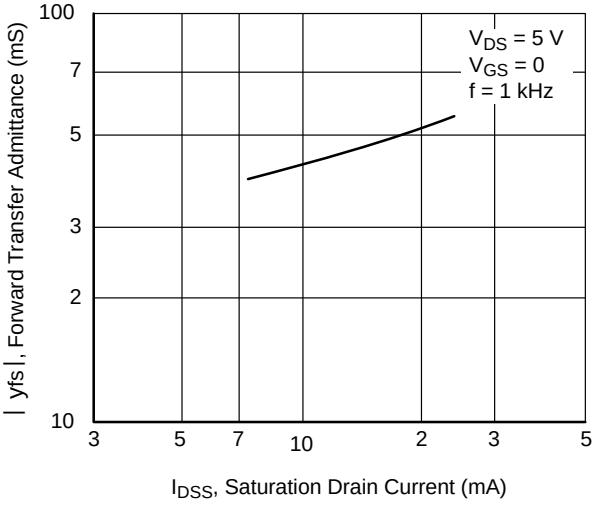


Figure 6. | yfs | − I_{DSS}

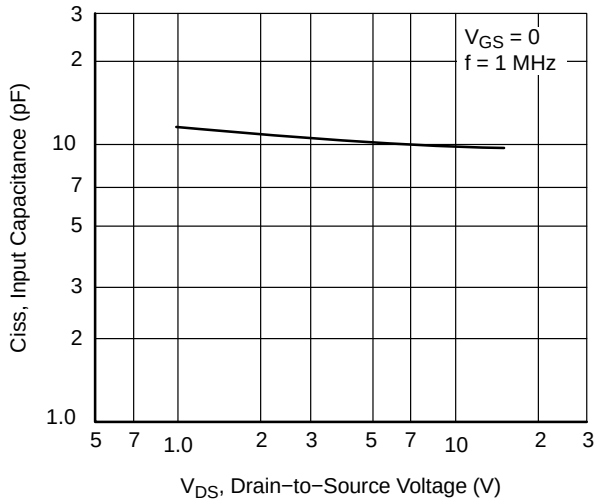


Figure 7. Ciss − V_{DS}

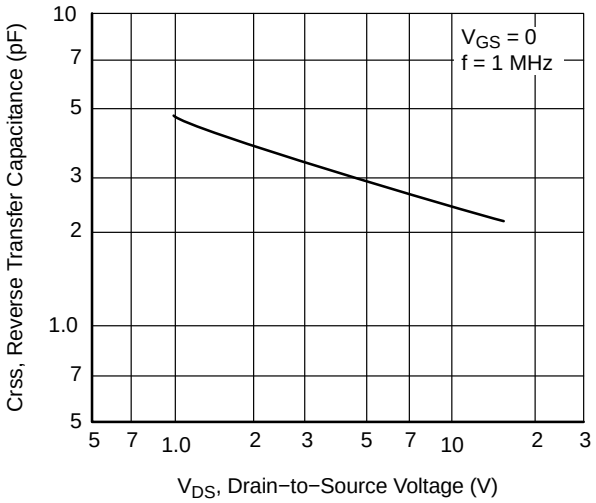


Figure 8. Crss − V_{DS}

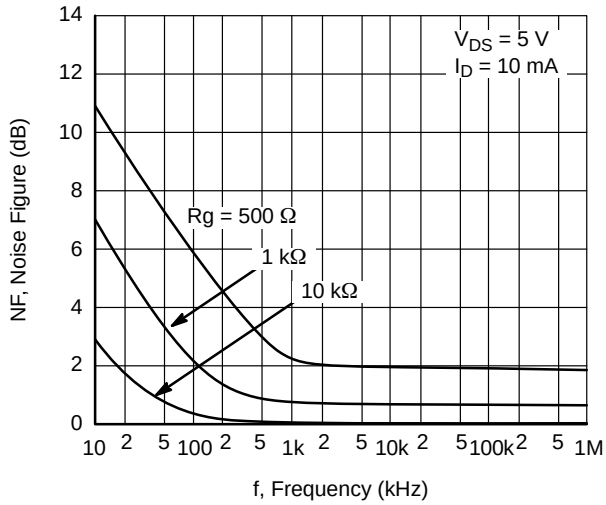


Figure 9. NF − f

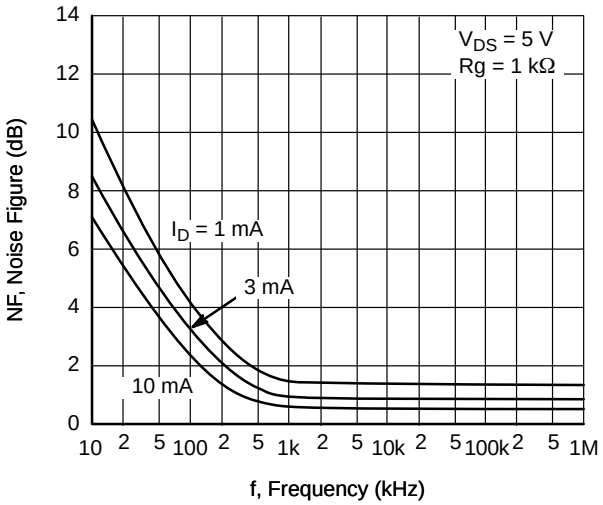


Figure 10. NF − f

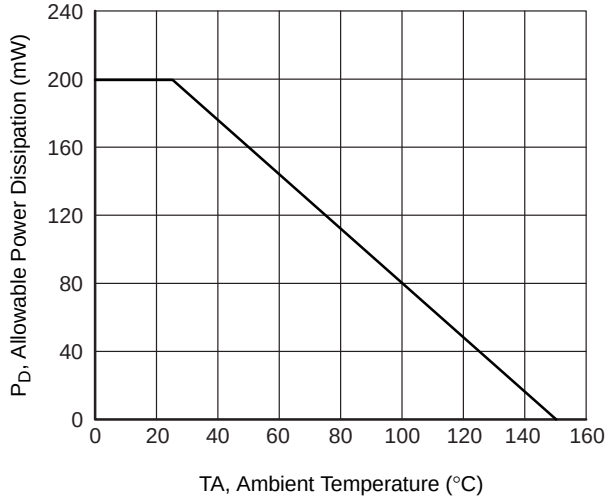


Figure 11. P_D − TA

SCALE 2:1

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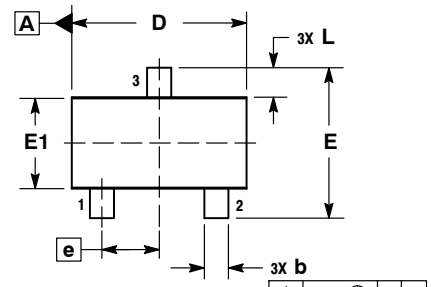
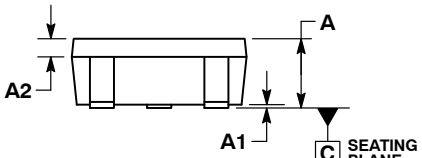
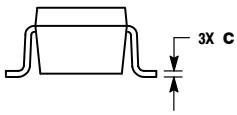


TOP VIEW



SIDE VIEW

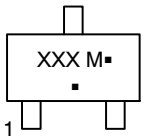


END VIEW

NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.20 PER SIDE.
4. DIMENSIONS D AND E1 ARE MEASURED AT THE OUTERMOST EXTREME OF THE PLASTIC BODY.
5. DIMENSIONS b AND c APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.10 AND 0.20 FROM THE TIP.

	MILLIMETERS	
DIM	MIN	MAX
A	0.95	1.35
A1	0.00	0.10
A2	0.20	0.40
b	0.35	0.50
c	0.10	0.20
D	2.75	3.05
E	2.30	2.70
E1	1.35	1.65
e	0.95 BSC	
L	0.35	0.75

GENERIC MARKING DIAGRAM

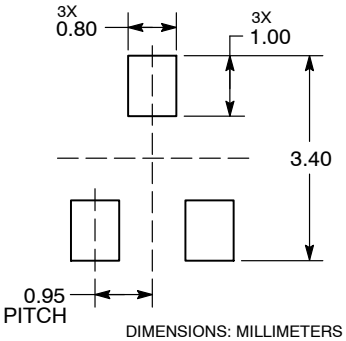


XXX = Specific Device Code
M = Date Code
▪ = Pb−Free Package

(Note: Microdot may be in either location)

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “ ▪”, may or may not be present.

RECOMMENDED SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

*For additional information on our Pb−Free strategy and soldering details, please download the **onsemi** Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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