

# 2SK715



## N-Channel JFET 15V, 7.3 to 24mA, 50mS

ON Semiconductor®

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### Applications

- AM Tuner RF Amp, Low-noise Amp
- HF Low-noise Amp

### Features

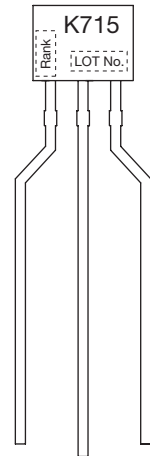
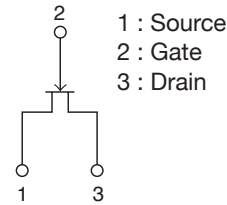
- Adoption of FBET Process
- Large  $|y_{fs}|$
- Small Ciss
- Very Low Noise Figure

### Specifications

#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>	15	V
Gate-to-Drain Voltage	V <sub>GDS</sub>	-15	V
Gate Current	I <sub>G</sub>	10	mA
Drain Current	I <sub>D</sub>	50	mA
Allowable Power Dissipation	P <sub>D</sub>	300	mW
Junction Temperature	T <sub>j</sub>	125	°C
Storage Temperature	T <sub>stg</sub>	-55 to +125	°C

### Electrical Connection Marking



2SK715U-AC  
2SK715V-AC  
2SK715W-AC

TO-92-3 / SPA-WA

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.

### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	V(BR)GDS	I <sub>G</sub> =-10μA, V <sub>DS</sub> =0V	-15			V
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =0V			-1.0	nA
Zero-Gate Voltage Drain Current	I <sub>DSS</sub> *	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V	7.3*		24.0*	mA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =100μA		-0.6	-1.4	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1kHz	25	50		mS
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1MHz		10		pF
Reverse Transfer Capacitance	C <sub>rss</sub>				3.0	
Noise Figure	NF	V <sub>DS</sub> =5V, R <sub>g</sub> =1kΩ, I <sub>D</sub> =1mA, f=1kHz		1.5		dB

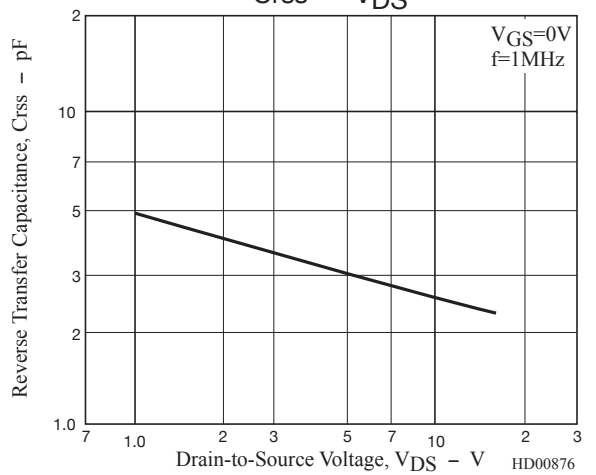
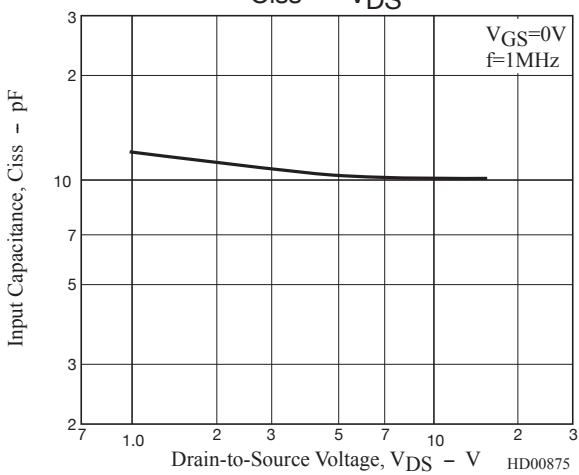
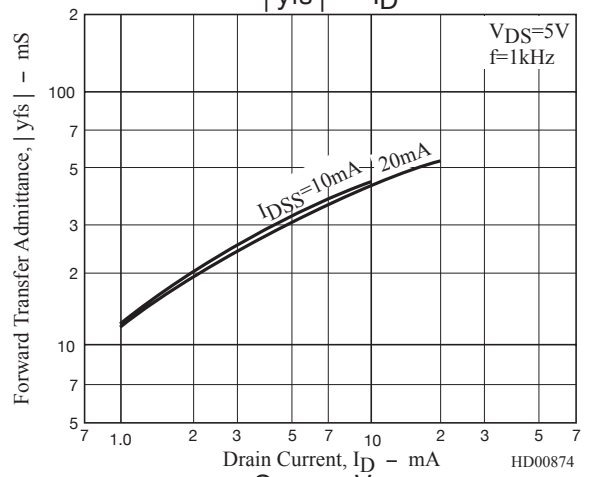
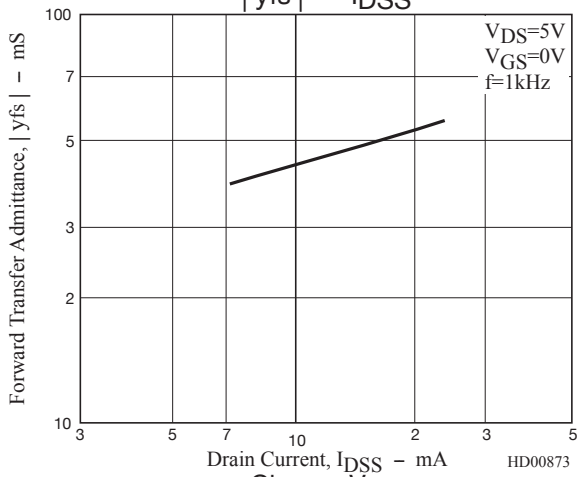
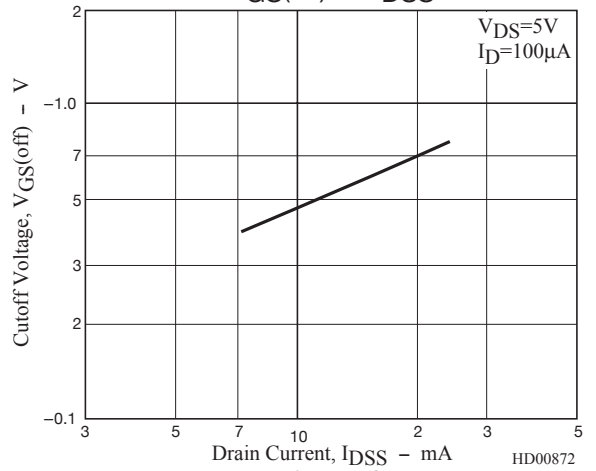
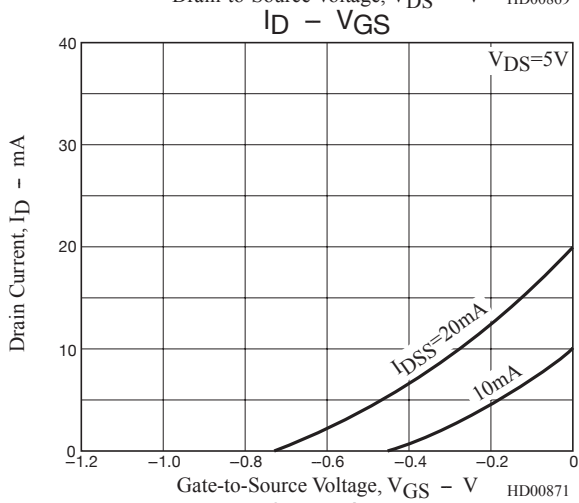
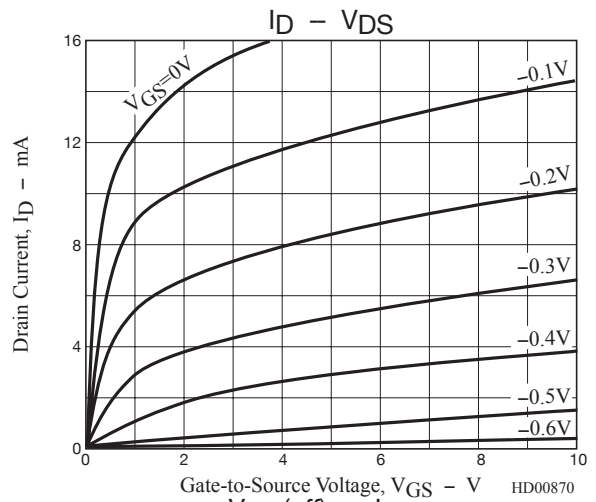
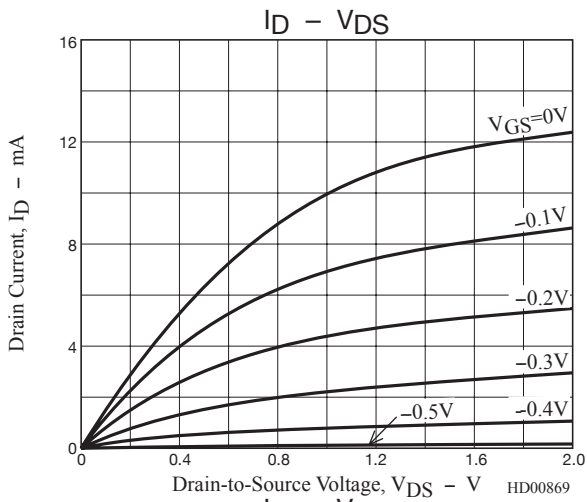
\* : The 2SK715 is classified by I<sub>DSS</sub> as follows : (unit : mA)

Rank	U	V	W
I <sub>DSS</sub>	7.3 to 12.0	10.0 to 17.0	14.5 to 24.0

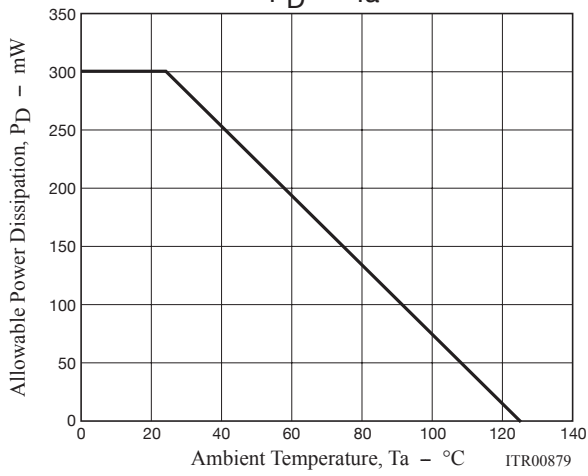
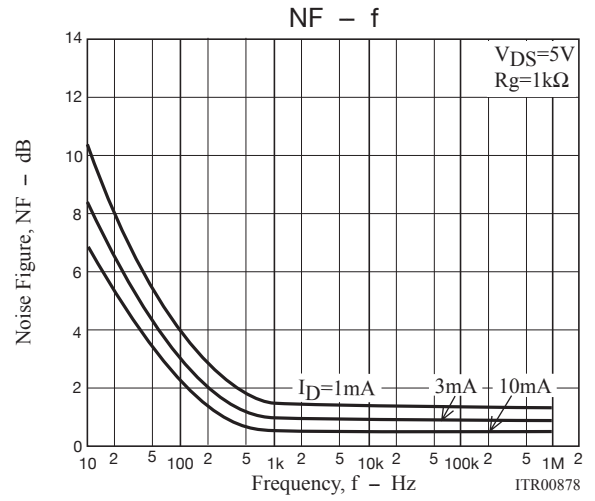
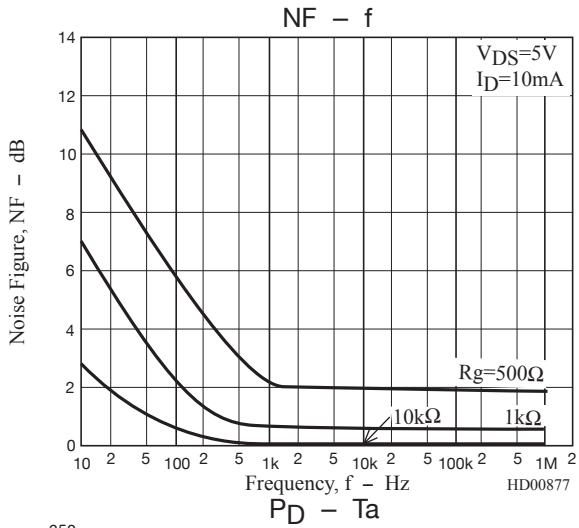
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

### ORDERING INFORMATION

See detailed ordering and shipping information on page 5 of this data sheet.



# 2SK715



# 2SK715

## Package Dimensions

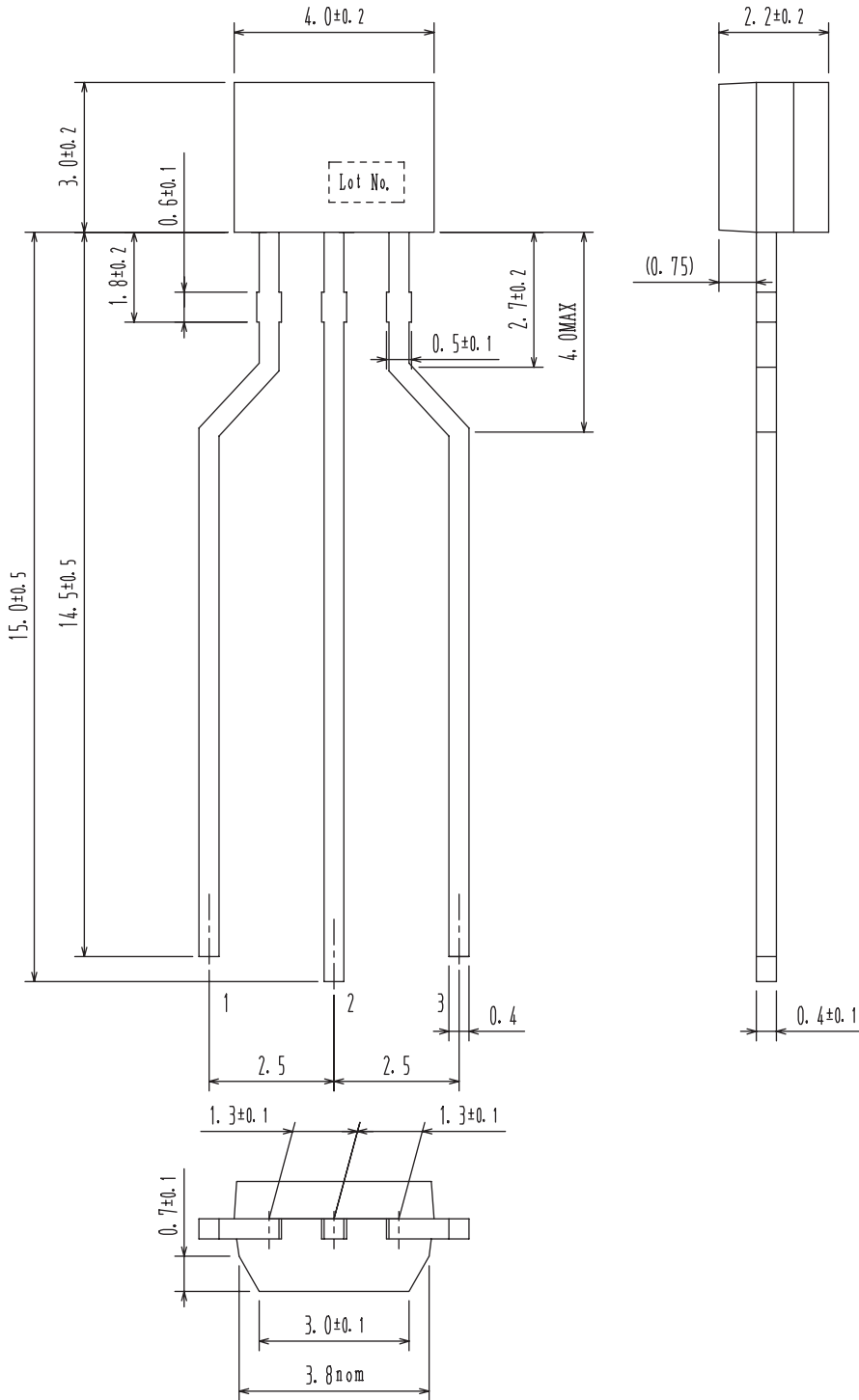
unit : mm

2SK715U-AC, 2SK715V-AC, 2SK715W-AC

TO-92 3 3.0x4.0 / SPA-WA

CASE 135AK

ISSUE 0



## ORDERING INFORMATION

Device	Package	Shipping	memo
2SK715U-AC	TO-92-3 / SPA-W	2,500pcs. / Tape and Reel	Pb-Free
2SK715V-AC			
2SK715W-AC			

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