



## J113M1

N-CHANNEL JFET

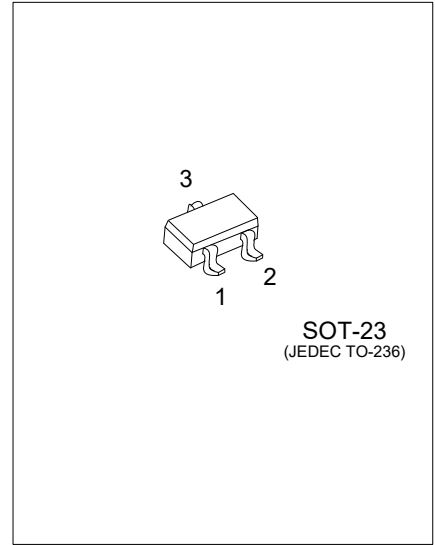
### N-CHANNEL SWITCH

#### DESCRIPTION

The UTC **J113M1** is designed for low level analog switching, sample and hold circuits and chopper stabilized amplifiers.

#### FEATURES

- \* MSL1 Robust Package Design
- \* Source & Drain are interchangeable.
- \* Green & Pb free



#### ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
J113M1-AE3-R	SOT-23	D	S	G	Tape Reel
J113M1-AE3-A-R	SOT-23	S	D	G	Tape Reel

Note: Pin Assignment: D: Drain S: Source G: Gate

<p>J113M1-AE3-A-R</p> <p>(1)Packing Type (2)Pin Code (3)Package Type</p>	<p>(1) R: Tape Reel (2) refer to Pin Assignment (3) AE3: SOT-23</p>
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#### MARKING

J113M1	J113M1-A

■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Drain-Gate Voltage	$V_{DG}$	35	V
Gate-Source Voltage	$V_{GS}$	-30	V
Forward Gate Current	$I_{GF}$	50	mA
Power Dissipation	$P_D$	350	mW
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATING	UNIT
Junction to Ambient	$\theta_{JA}$	357	$^\circ\text{C/W}$
Junction to Case	$\theta_{JC}$	125	$^\circ\text{C/W}$

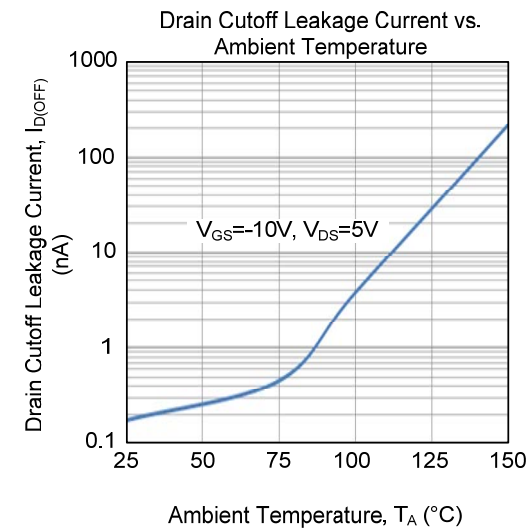
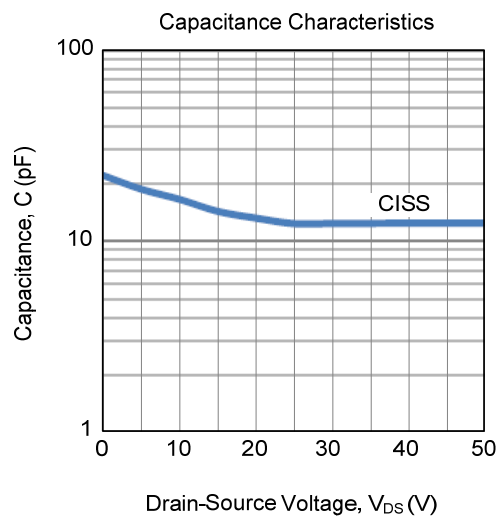
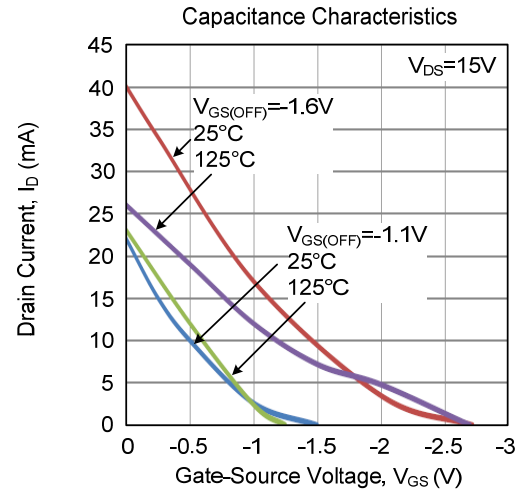
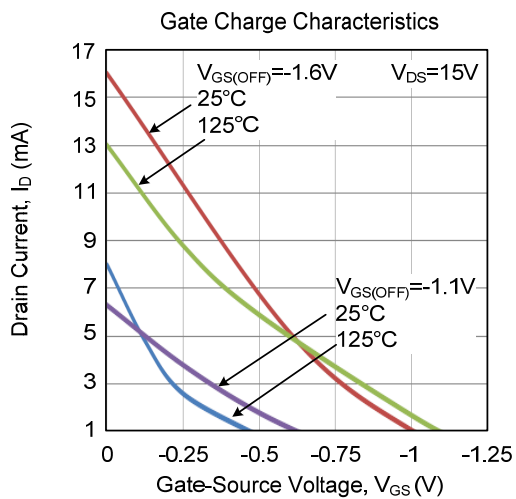
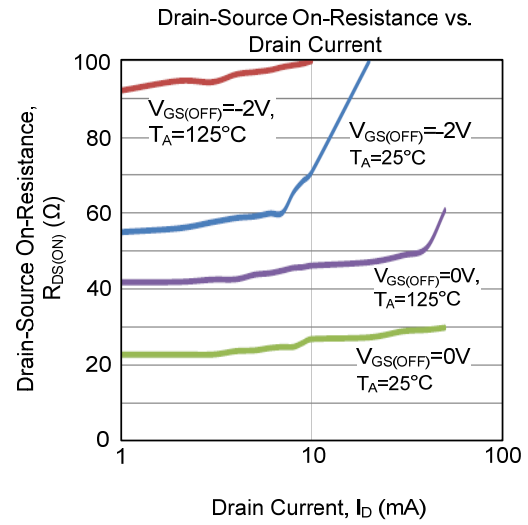
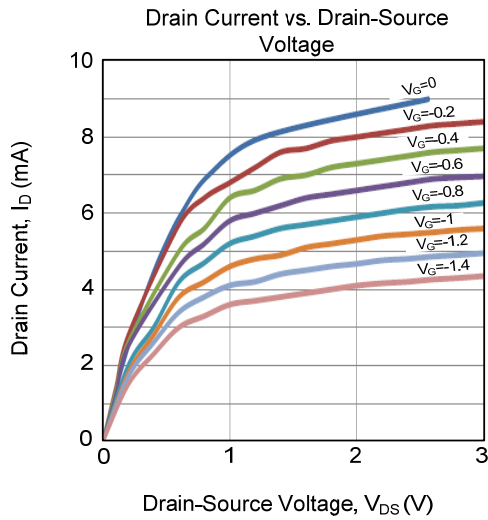
Note: Device mounted on FR-4 PCB 36mm × 18mm × 1.5mm, mounting pad for the collector lead minimum 6cm<sup>2</sup>.

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>OFF CHARACTERISTICS</b>						
Gate-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G=-1.0\mu\text{A}$ , $V_{DS}=0$	-30			V
Gate Reverse Current (Note)	$I_{GSS}$	$V_{GS}=-15\text{V}$ , $V_{DS}=0$			-1.0	nA
Gate-Source Cut-Off Voltage	$V_{GS(OFF)}$	$V_{DS}=15\text{V}$ , $I_D=1.0\mu\text{A}$	-0.5		-3.0	V
Drain Cutoff Leakage Current	$I_{D(OFF)}$	$V_{DS}=5.0\text{V}$ , $V_{GS}=-10\text{V}$			1.0	nA
<b>ON CHARACTERISTICS</b>						
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=15\text{V}$ , $V_{GS}=0$	2.0			mA
Drain-Source On Resistance	$R_{DS(ON)}$	$V_{DS}\leq 0.1\text{V}$ , $V_{GS}=0$			100	$\Omega$
<b>SMALL SIGNAL CHARACTERISTICS</b>						
Drain-Gate On Capacitance	$C_{DG(ON)}$	$V_{DS}=0\text{V}$ , $V_{GS}=0\text{V}$ , $F=1\text{MHz}$			28	pF
Source-Gate On Capacitance	$C_{SG(ON)}$	$V_{DS}=0\text{V}$ , $V_{GS}=0\text{V}$ , $F=1\text{MHz}$			28	pF

Note: Pulse test: pulse width  $\leq 300\ \mu\text{s}$ , duty cycle  $\leq 2\%$ .

## TYPICAL CHARACTERISTICS



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