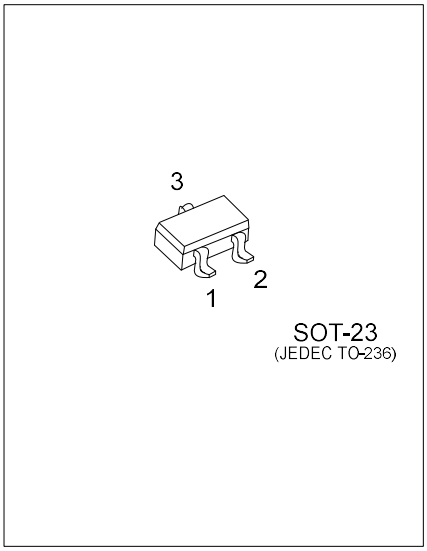
J113

N-CHANNEL JFET

N-CHANNEL SWITCH



■ DESCRIPTION

The UTC **J113** is designed for low level analog switching, sample and hold circuits and chopper stabilized amplifiers.

■ FEATURES

* Source & Drain are interchangeable.

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
J113L-AE3-R	J113G-AE3-R	SOT-23	D	S	G	Tape Reel
J113L-AE3-A-R	J113G-AE3-A-R	SOT-23	S	D	G	Tape Reel

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

J113G-AE3-A-R (1)Packing Type (2)Pin Code (3)Package Type (4)Green Package	(1) R: Tape Reel (2) refer to Pin Assignment (3) AE3: SOT-23 (4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

J113	J113-A
J113□ → L: Lead Free, G: Halogen Free	113A□ → L: Lead Free, G: Halogen Free

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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	°C
Storage Temperature	T_{STG}	-55 ~ +150	°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	θ_{JA}	357	°C/W
Junction to Case	θ_{JC}	125	°C/W

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

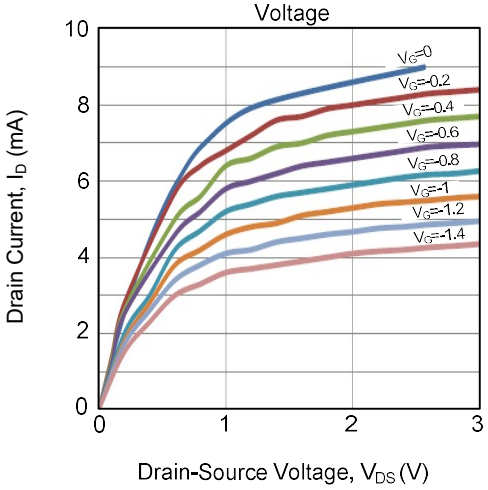
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

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

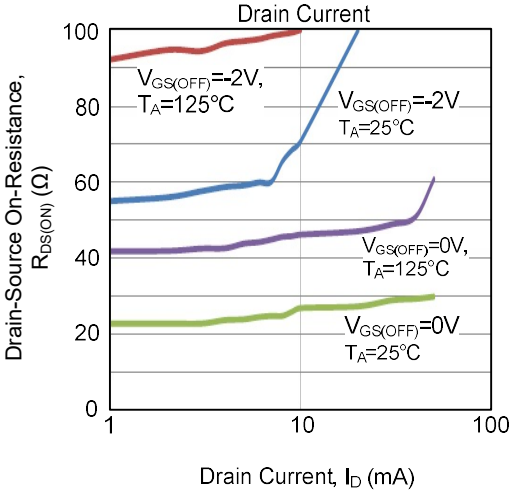
Note: Pulse test: pulse width ≤ 300 μs, duty cycle ≤ 2%.

■ TYPICAL CHARACTERISTICS

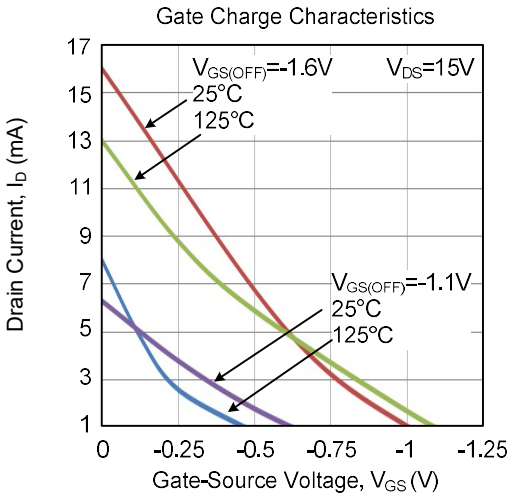
Drain Current vs. Drain-Source Voltage



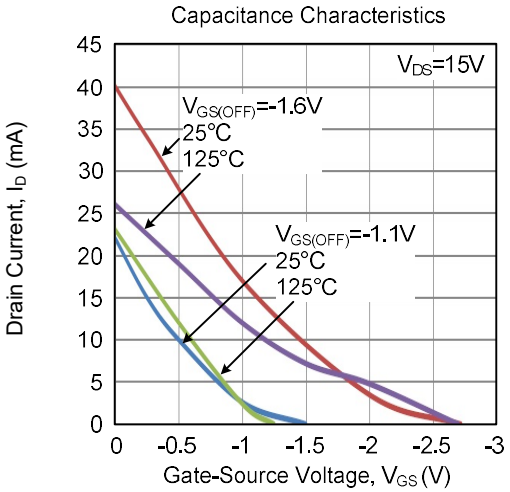
Drain-Source On-Resistance vs. Drain Current



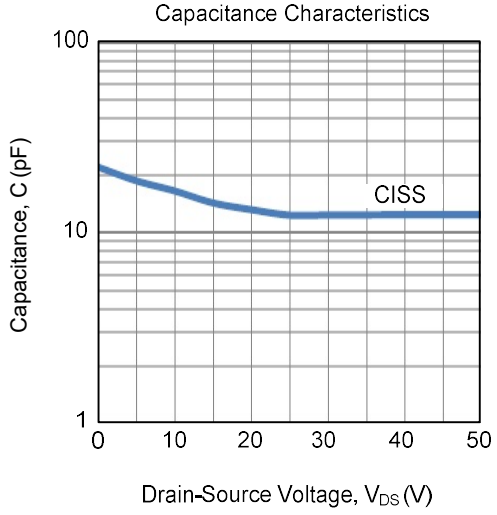
Gate Charge Characteristics



Capacitance Characteristics



Capacitance Characteristics



Drain Cutoff Leakage Current vs. Ambient Temperature