



TF218

JFET

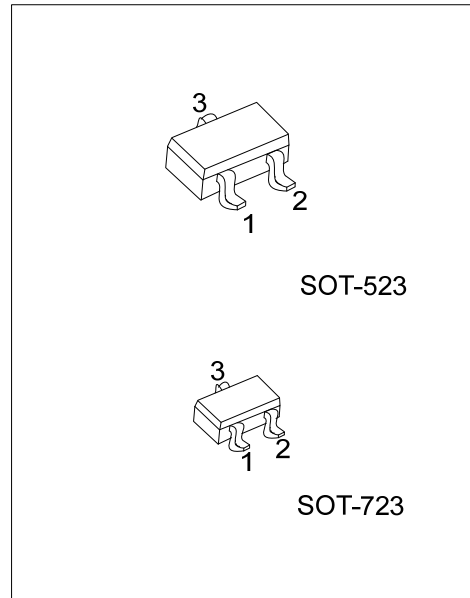
N-CHANNEL JUNCTION FIELD EFFECT TRANSISTOR

■ DESCRIPTION

The UTC **TF218** is an N-channel junction field effect transistor, and it can be specially used in electronic condenser microphone specially.

■ FEATURES

* Good voltage characteristics and transient characteristics.



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TF218L-xx-AN3-R	TF218G-xx-AN3-R	SOT-523	D	S	G	Tape Reel
TF218L-xx-AQ3-R	TF218G-xx-AQ3-R	SOT-723	D	S	G	Tape Reel

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

<p>TF218G-xx-AN3-R</p>	<p>(1) R: Tape Reel (2) AN3: SOT-523, AQ3: SOT-723 (3) x: refer to Classification of I_{DSS} (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

TF218-E3	TF218-E4	TF218-E5

■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Gate to Drain Voltage	V _{GDO}	-20	V
Gate Current	I _G	10	mA
Drain Current	I _D	1	mA
Power Dissipation	P _D	100	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.

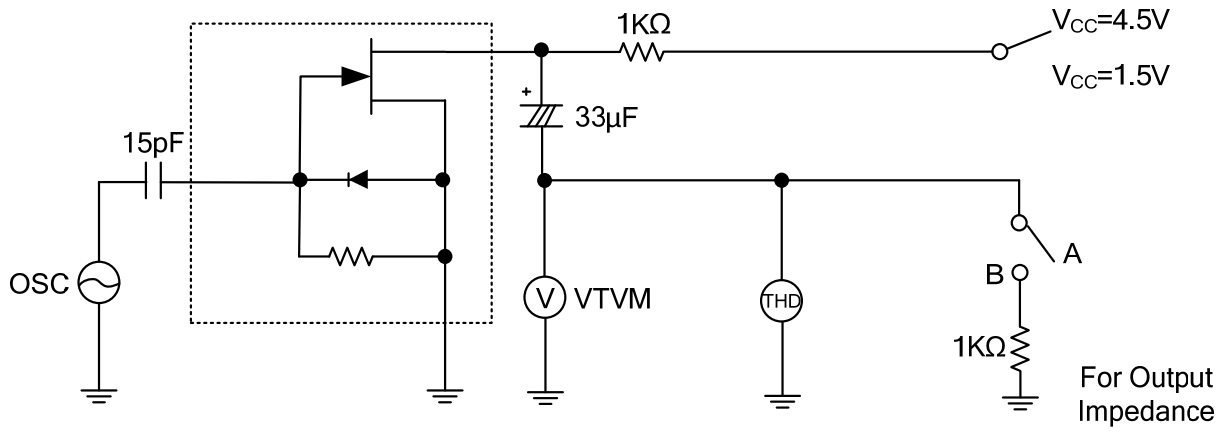
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
G-D Breakdown Voltage	BV _{GDO}	I _G =-100uA	-20			V
Gate Off Voltage	V _{GS(OFF)}	V _{DS} =5.0V, I _D =1uA	-0.2	-0.6	-1.0	V
Drain Current	I _{DSS}	V _{DS} =2.0V, V _{GS} =0	100		350	μA
Forward Transfer Admittance	YFS	V _{DS} =2.0V, V _{GS} =0, f=1KHz	0.65	1.0		ms
Input Capacitance	CISS	V _{DS} =5.0V, V _{GS} =0, f=1MHz		3.5		pF
Reverse Transfer Capacitance	CRSS	V _{DS} =5.0V, V _{GS} =0, f=1MHz		0.65		pF
Voltage Gain	G _V	V _{IN} =10mV, f=1KHz		-3.0		dB
Reduced Voltage Characteristic	ΔG _{VV}	V _{IN} =10mV, f=1KHz V _{CC} =4.5→1.5V		-1.2	-3.5	dB
Frequency Characteristic	ΔG _{Vf}	f=1KHz~110Hz			-1.0	dB
Input Resistance	Z _{IN}	f=1KHz	25			MΩ
Output Resistance	Z _O	f=1KHz		1000		Ω
Total Harmonic Distortion	THD	V _{IN} =30mV, f=1KHz		1.2		%
Output Noise Voltage	V _{NO}	V _{IN} =0, A Curve			-110	dB

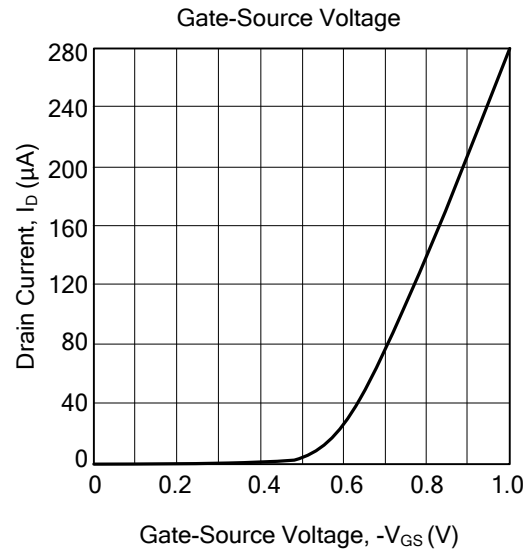
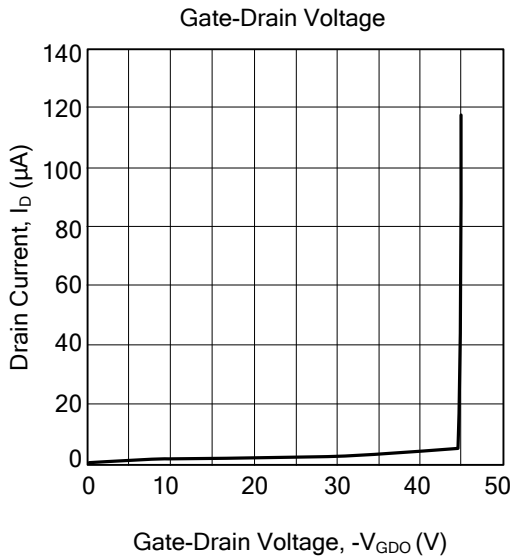
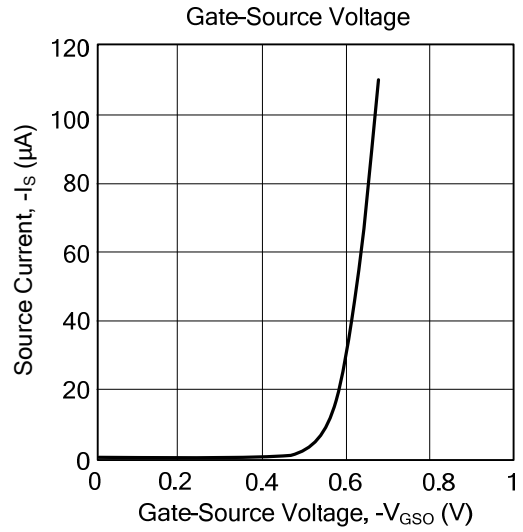
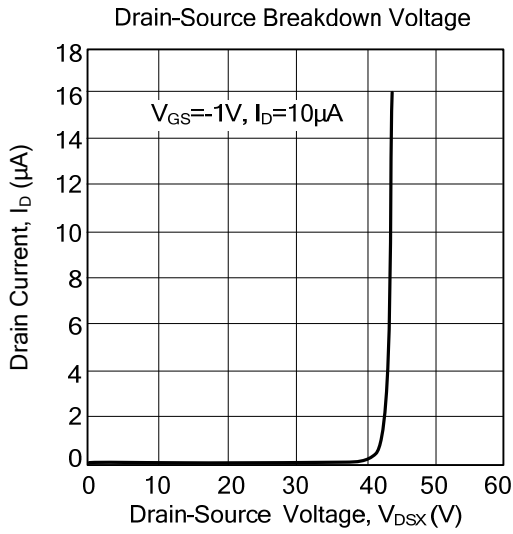
■ CLASSIFICATION OF I_{DSS}

RANK	E3	E4	E5
RANGE	100-170	140-240	210-350

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



■ TYPICAL CHARACTERISTICS



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