



TF215

Preliminary

JFET

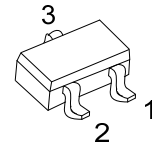
N-CHANNEL JUNCTION FIELD EFFECT TRANSISTOR

DESCRIPTION

The UTC **TF215** is an N-channel junction field effect transistor, and it can be specially used in electronic condenser microphone.

FEATURES

- * Good voltage characteristics and transient characteristics.
- * Halogen Free



SOT-523

ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
TF215G-x-AN3-R	SOT-523	S	D	G	Tape Reel

TF215G-x-AN3-R	(1)Packing Type (2)Package Type (3)Rank (4)Halogen Free	(1) R: Tape Reel (2) AN3: SOT-523 (3) x: refer to Classification of I_{DSS} (4) G: Halogen Free
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MARKING

TF215-D4	TF215-D5

■ ABSOLUTE MAXIMUM RATING (Ta=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.

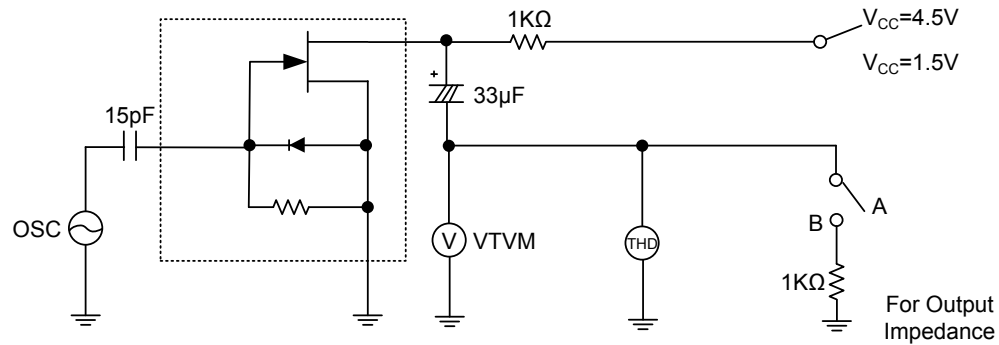
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
G-D Breakdown Voltage	BV_{GDO}	$I_G = -100\mu A$	-20			V
Gate Off Voltage	$V_{GS(OFF)}$	$V_{DS} = 5.0V, I_D = 1\mu A$	-0.2	-0.6	-1.0	V
Drain Current	I_{DSS}	$V_{DS} = 5.0V, V_{GS} = 0$	140		350	μA
Forward Transfer Admittance	YFS	$V_{DS} = 2.0V, V_{GS} = 0, f = 1KHz$	0.8	1.2		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}	$V_{IN} = 10mV, f = 1KHz, V_{CC} = 4.5 \rightarrow 1.5V$		-1.2	-3.5	dB
Frequency Characteristic	ΔG_{VF}	$f = 1KHz \sim 110Hz$			-1.0	dB
Input Resistance	Z_{IN}	$f = 1KHz$	25			M Ω
Output Resistance	Z_O	$f = 1KHz$		1000		Ω
Total Harmonic Distortion	THD	$V_{IN} = 30mV, f = 1KHz$		1.2		%
Output Noise Voltage	V_{NO}	$V_{IN} = 0, A \text{ Curve}$			-110	dB

■ CLASSIFICATION OF I_{DSS}

RANK	D4	D5
RANGE	140-240	210-350

■ TEST CIRCUIT (Ta=25°C)



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