



TF262TH

N-Channel JFET 20V, 140 to 350 μ A, 0.95mS, VTFP

ON Semiconductor®

<http://onsemi.com>

Features

- Low output noise voltage : $V_{NO} = -112\text{dB typ.}$ ($V_{CC} = 2\text{V}$, $R_L = 2.2\text{k}\Omega$, $C_{in} = 5\text{pF}$)
- Ultrasmall package facilitates miniaturization in end products : $1.4\text{mm} \times 1.2\text{mm} \times 0.34\text{mm}$
- Especially suited for use in electret condenser microphone for audio equipments and telephones
- Adoption of FBET process
- Halogen free compliance

Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

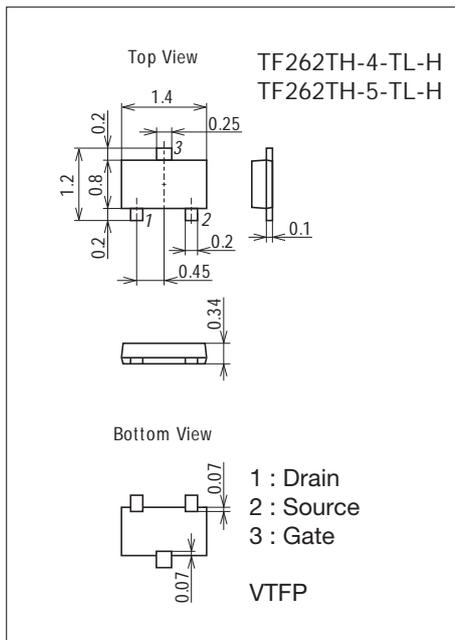
Parameter	Symbol	Conditions	Ratings	Unit
Gate to Drain Voltage	V_{GDO}		-20	V
Gate Current	I_G		10	mA
Drain Current	I_D		1	mA
Allowable Power Dissipation	P_D		100	mW
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions

unit : mm (typ)

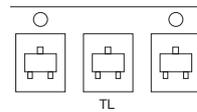
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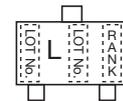
Product & Package Information

- Package : VTFP
- JEITA, JEDEC : SC-106A
- Minimum Packing Quantity : 8,000 pcs./real

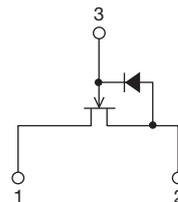
Packing Type: TL



Marking



Electrical Connection



TF262TH

Electrical Characteristics at Ta=25°C

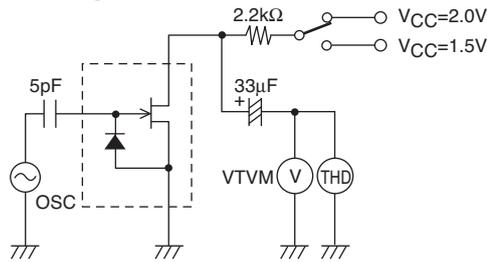
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate to Drain Breakdown Voltage	$V_{(BR)GDO}$	$I_G = -100\mu A$	-20			V
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 2V, I_D = 1\mu A$	-0.2	-0.5	-1.0	V
Drain Current	I_{DSS}	$V_{DS} = 2V, V_{GS} = 0V$	140*		350*	μA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 2V, V_{GS} = 0V, f = 1kHz$	0.5	0.95		mS
Input Capacitance	C_{iss}	$V_{DS} = 2V, V_{GS} = 0V, f = 1MHz$		3.5		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 2V, V_{GS} = 0V, f = 1MHz$		0.65		pF
[Ta=25°C, VCC=2.0V, RL=2.2kΩ, Cin=5pF, See specified Test Circuit.]						
Voltage Gain	GV	$V_{IN} = 10mV, f = 1kHz$		-1.5		dB
Reduced Voltage Characteristic	ΔGW	$V_{IN} = 10mV, f = 1kHz, V_{CC} = 2.0V \rightarrow 1.5V$		-0.8	-2.0	dB
Frequency Characteristic	ΔGvf	$f = 1kHz \text{ to } 110Hz$			-1.0	dB
Total Harmonic Distortion	THD	$V_{IN} = 30mV, f = 1kHz$		0.5		%
Output Noise Voltage	V_{NO}	$V_{IN} = 0V, A \text{ Curve}$		-112		dB

* : The TF262TH is classified by I_{DSS} as follows : (unit : μA)

Marking	L4	L5
Rank	4	5
I_{DSS}	140 to 240	210 to 350

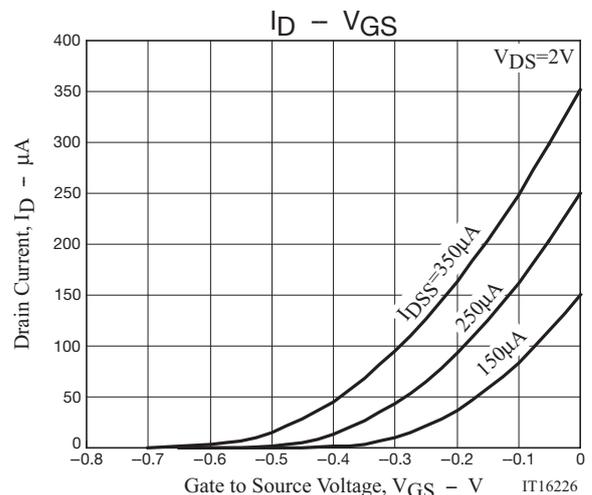
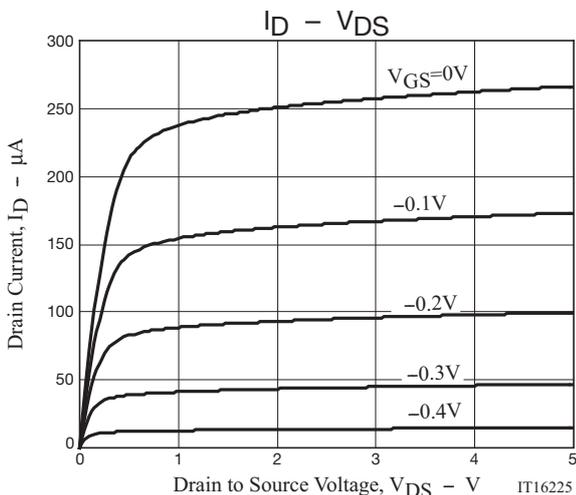
Test Circuit

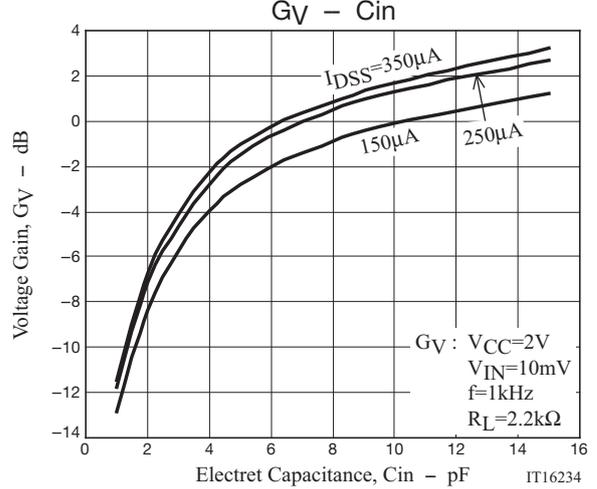
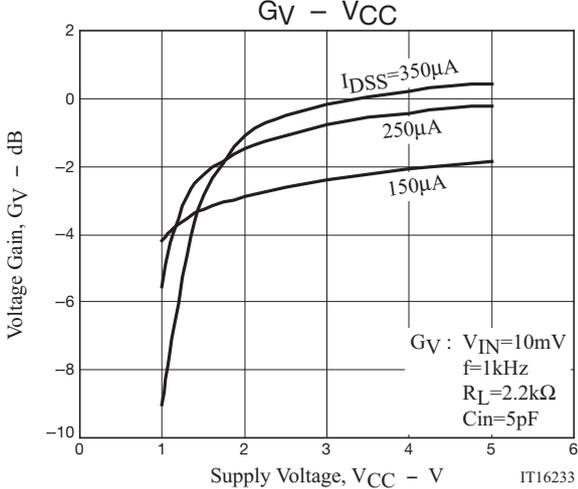
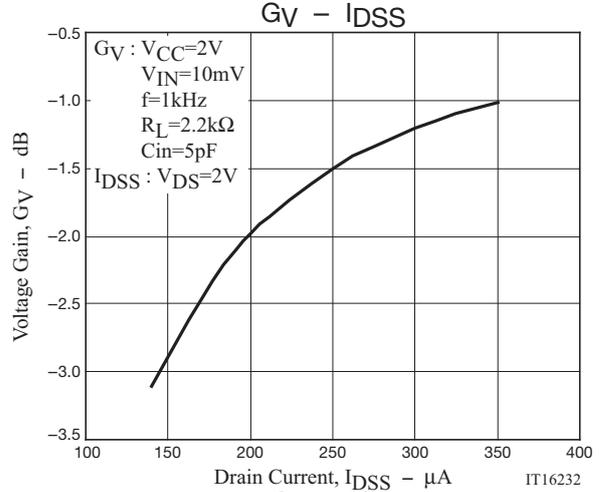
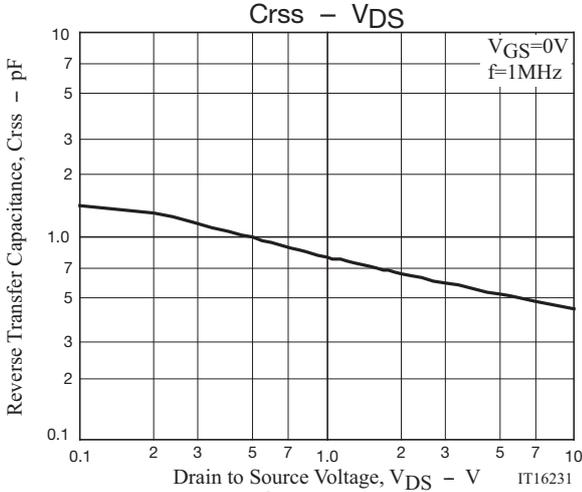
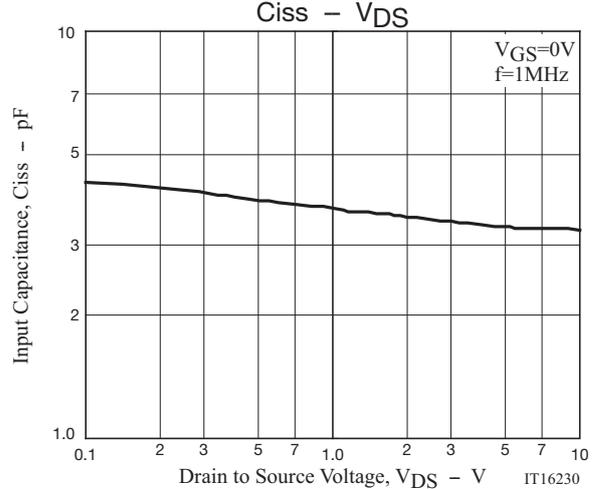
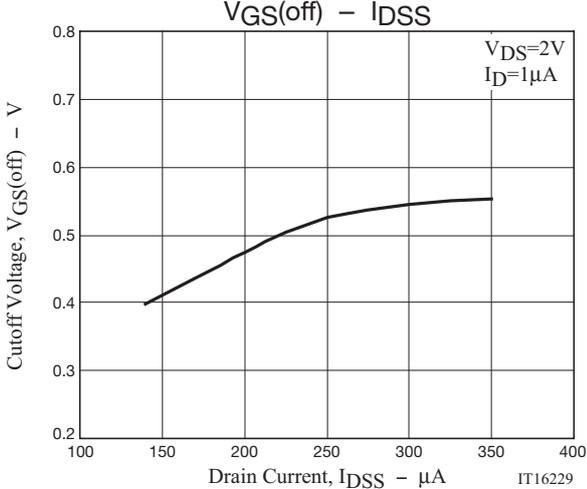
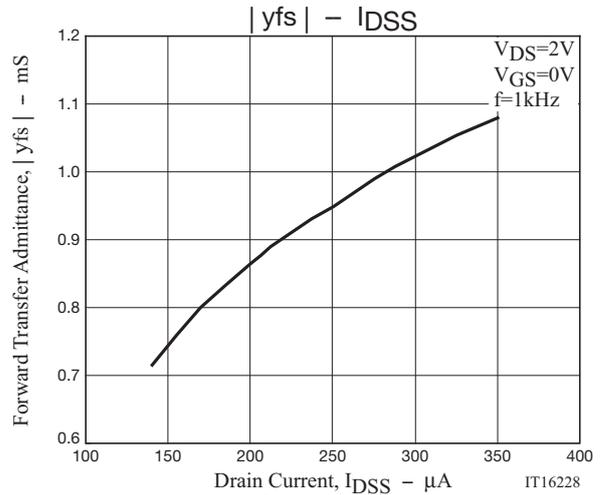
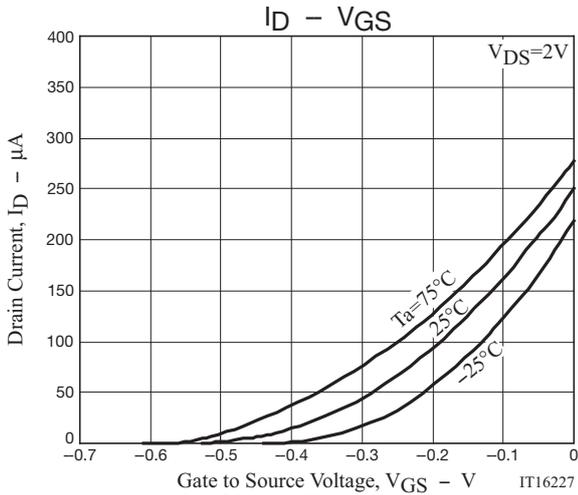
- Voltage gain
- Frequency Characteristic
- Distortion
- Reduced Voltage Characteristic

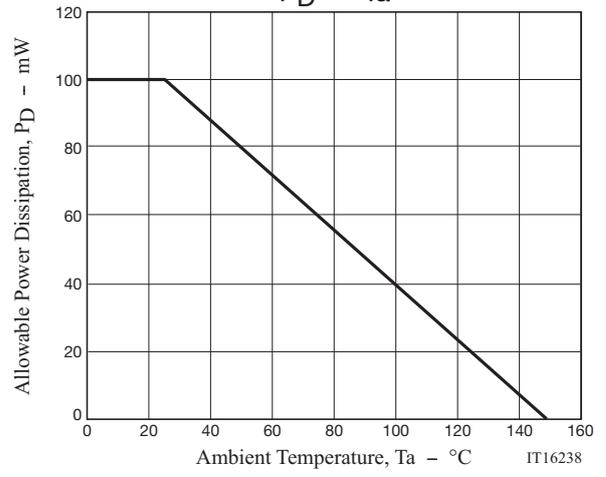
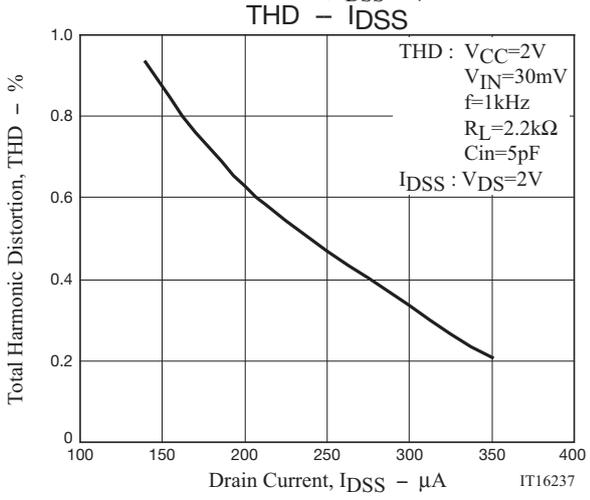
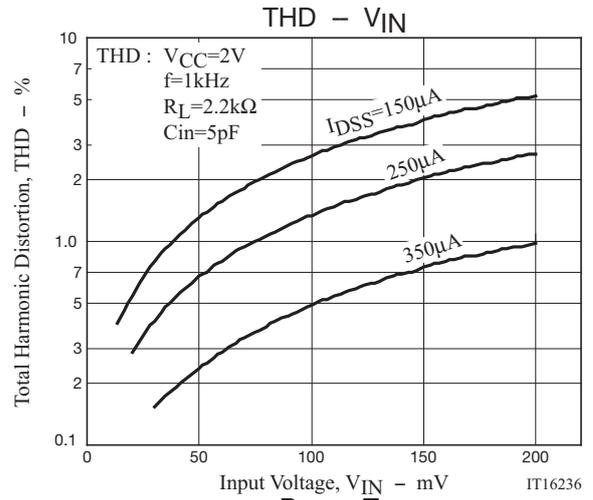
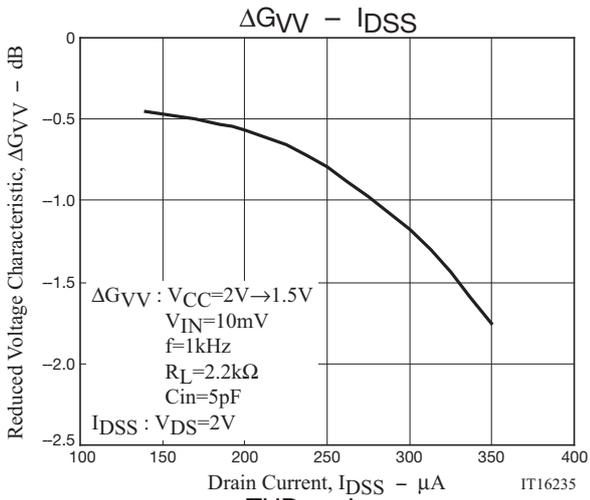


Ordering Information

Device	Package	Shipping	memo
TF262TH-4-TL-H	VTFP	8,000pcs./reel	Pb-Free and Halogen Free
TF262TH-5-TL-H			



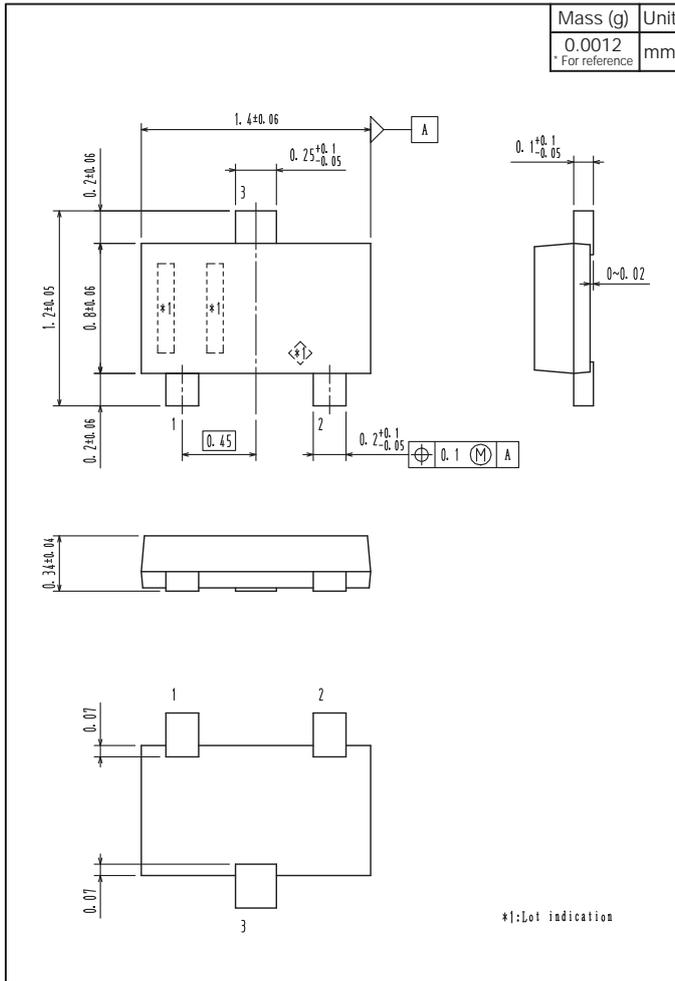




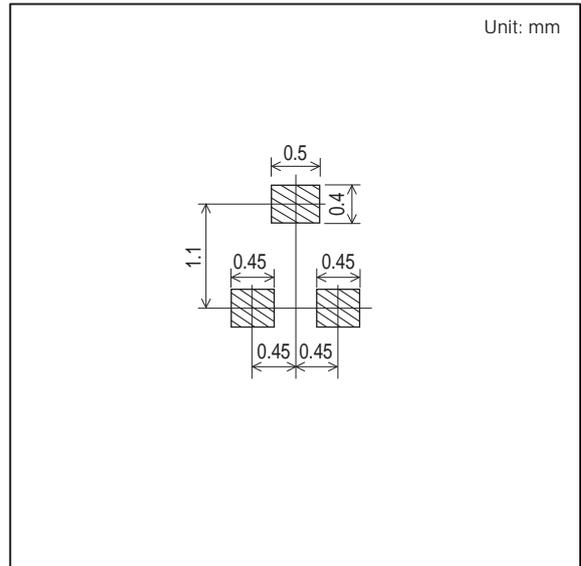
TF262TH

Outline Drawing

TF262TH-4-TL-H, TF262TH-5-TL-H



Land Pattern Example



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