



# TF262TH

## N-Channel JFET 20V, 140 to 350 $\mu$ 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  $T_a = 25^\circ\text{C}$

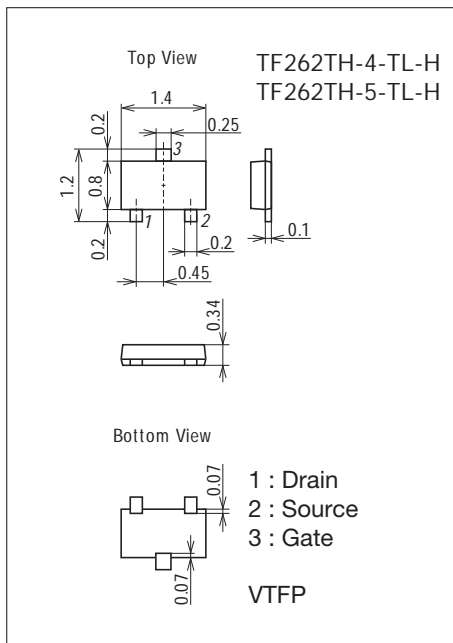
Parameter	Symbol	Conditions	Ratings	Unit
Gate to Drain Voltage	$V_{GDO}$		-20	V
Gate Current	$I_G$		10	mA
Drain Current	$I_D$		1	mA
Allowable Power Dissipation	$P_D$		100	mW
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

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)

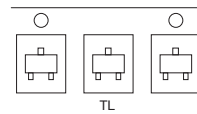
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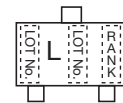
### Product & Package Information

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

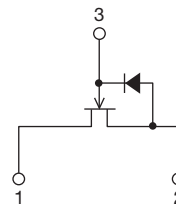
### Packing Type: TL



### Marking



### Electrical Connection



# TF262TH

## Electrical Characteristics at Ta=25°C

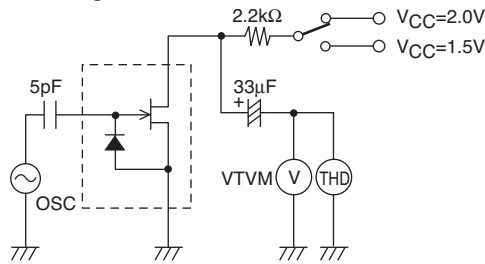
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate to Drain Breakdown Voltage	$V_{(BR)GDO}$	$I_G = -100\mu A$	-20			V
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 2V, I_D = 1\mu A$	-0.2	-0.5	-1.0	V
Drain Current	$I_{DSS}$	$V_{DS} = 2V, V_{GS} = 0V$	140*		350*	$\mu A$
Forward Transfer Admittance	$ 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	$\Delta GW$	$V_{IN} = 10mV, f = 1kHz, V_{CC} = 2.0V \rightarrow 1.5V$		-0.8	-2.0	dB
Frequency Characteristic	$\Delta Gvf$	$f = 1kHz \text{ to } 110Hz$			-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 :  $\mu A$ )

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

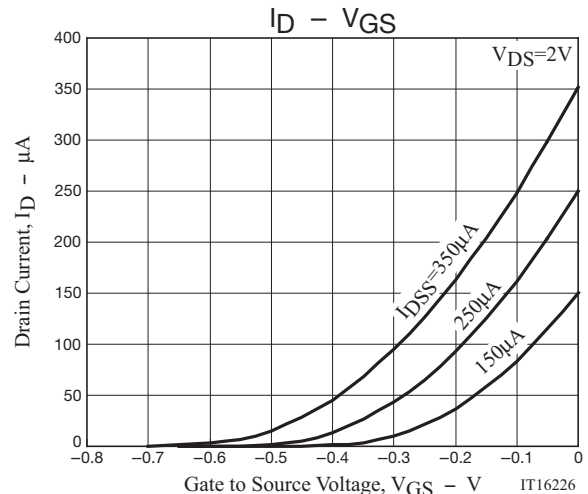
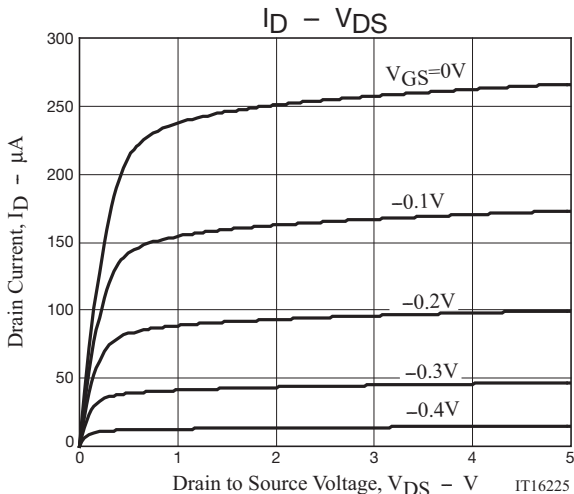
## Test Circuit

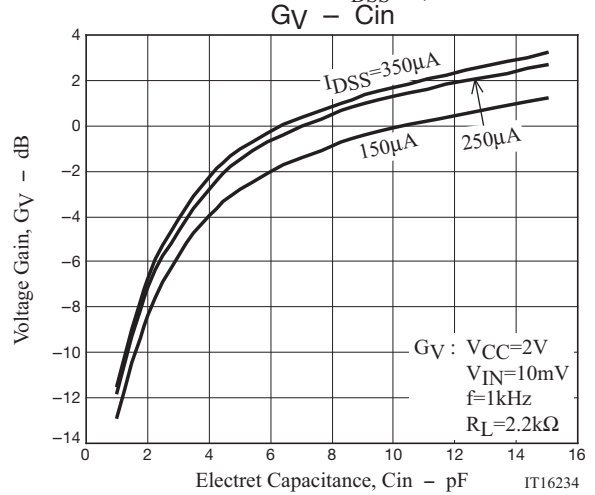
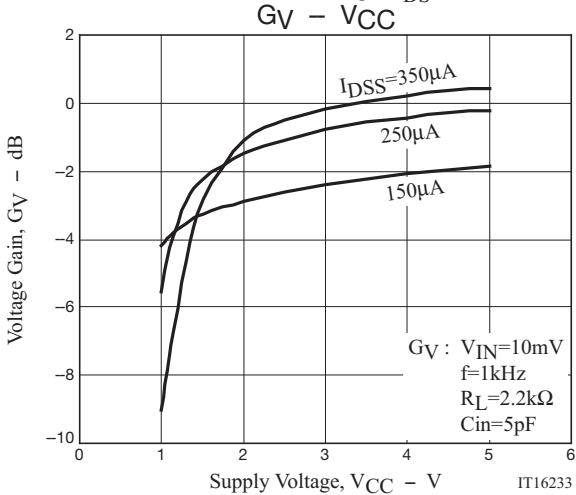
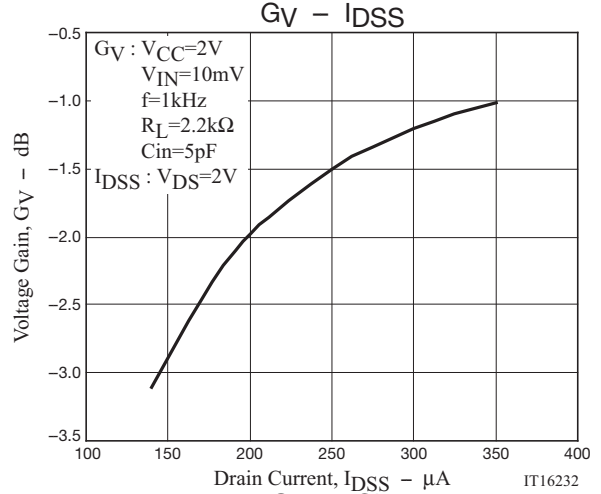
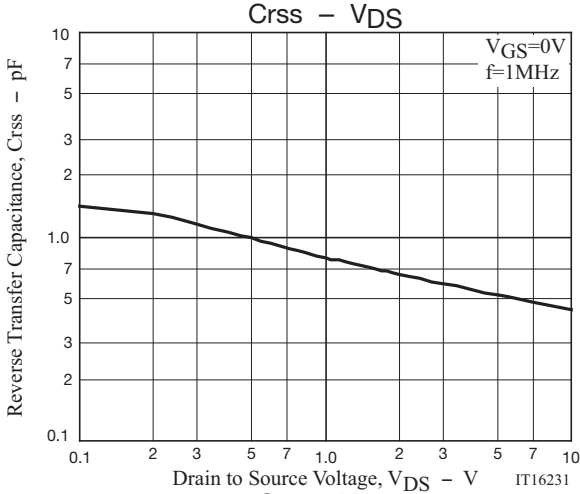
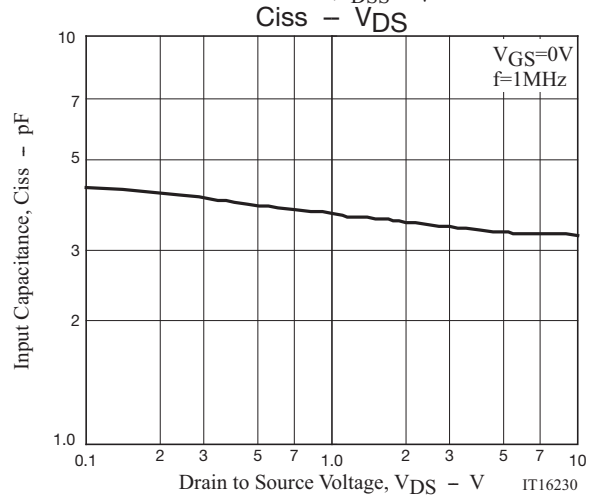
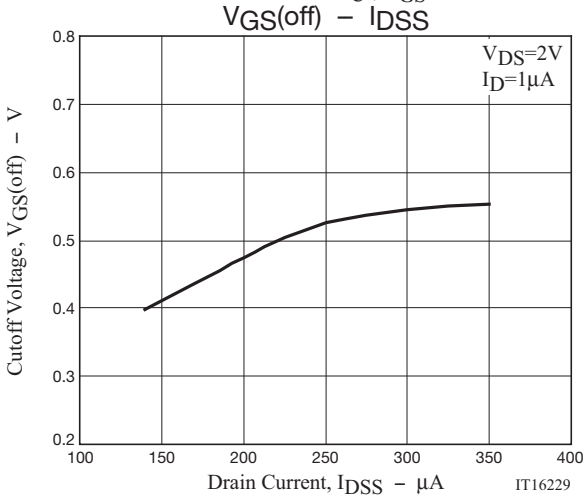
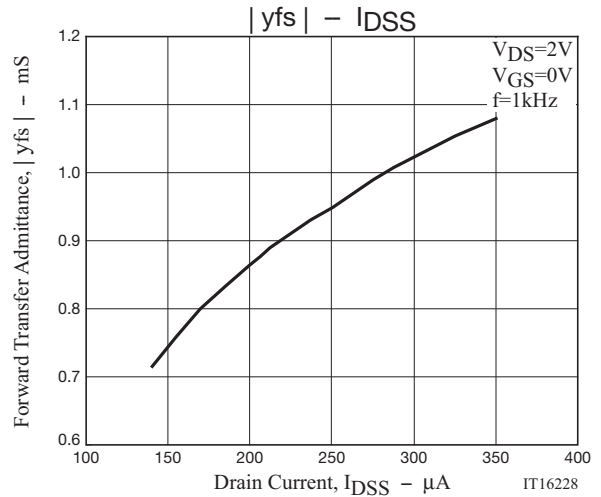
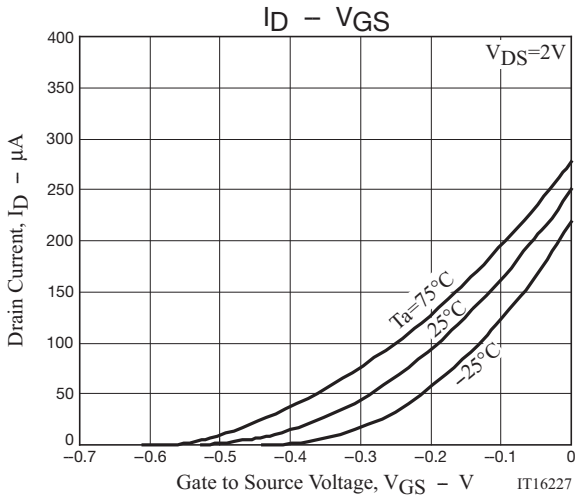
- Voltage gain
- Frequency Characteristic
- Distortion
- Reduced Voltage Characteristic

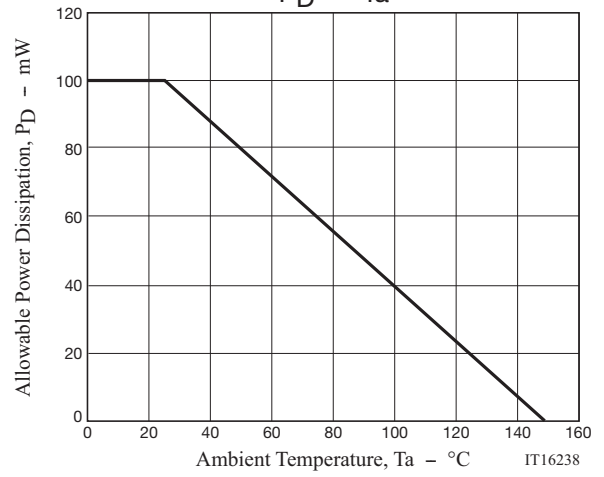
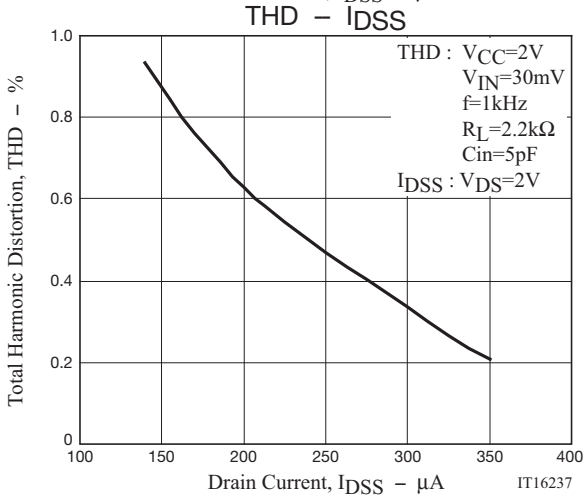
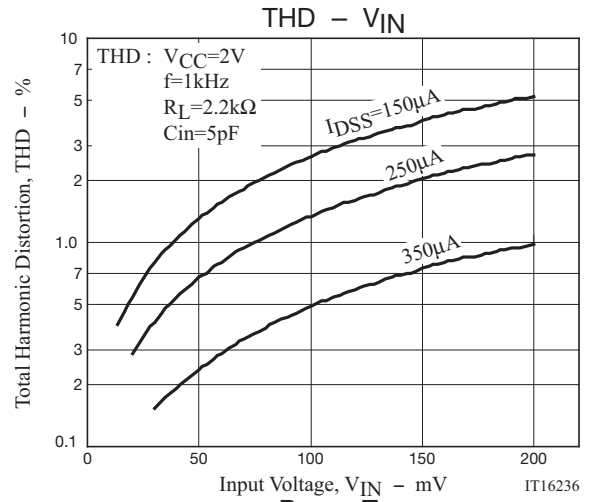
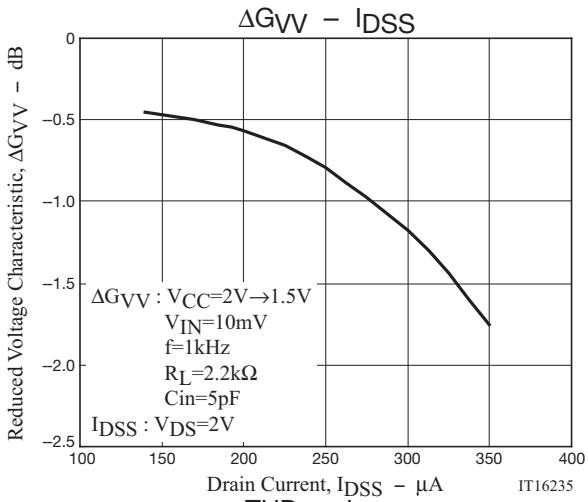


## Ordering Information

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



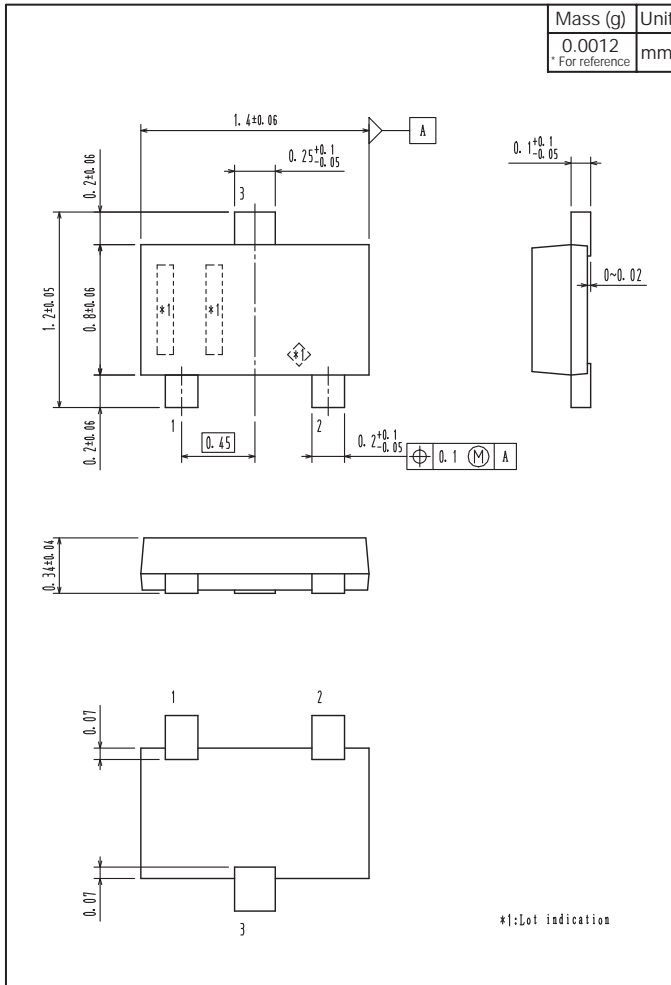




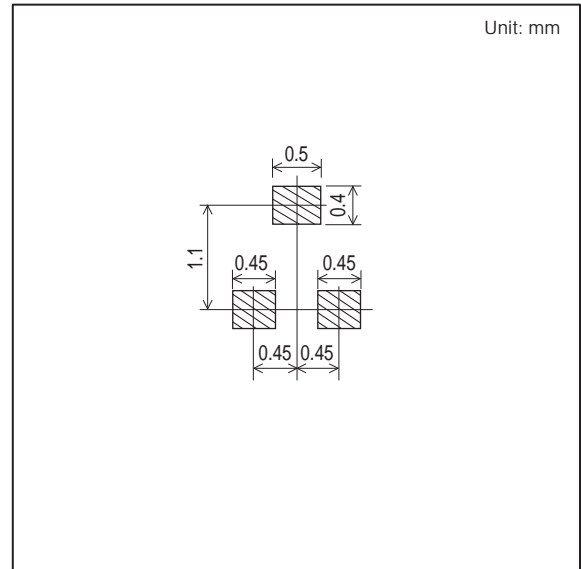
# TF262TH

## Outline Drawing

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



## Land Pattern Example



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