



N-Channel Silicon Junction FET

# TF408 — Low-Frequency General-Purpose Amplifier, Impedance Converter Applications

## Applications

- Low-Frequency general-purpose amplifier, impedance conversion, infrared sensor applications

## Features

- Ultrasmall package facilitates miniaturization in end products : 1.0mm×0.6mm×0.27mm (max 0.3mm)
- Small IGSS : max -1.0nA (VGS= -20V, VDS=0V)
- Small Ciss : typ 4pF (VDS= 10V, VGS=0V, f=1MHz)
- Halogen free compliance

## Specifications

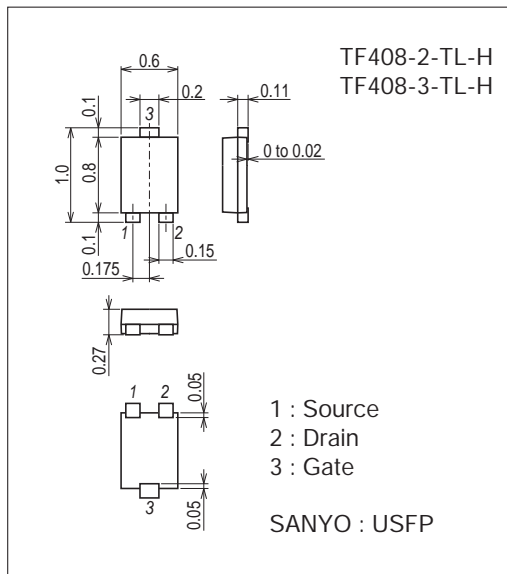
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSX		30	V
Gate-to-Drain Voltage	VGDS		-30	V
Gate Current	IG		10	mA
Drain Current	ID		10	mA
Allowable Power Dissipation	PD		30	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

## Package Dimensions

unit : mm (typ)

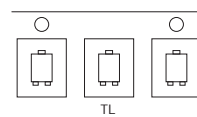
7055-003



## Product & Package Information

- Package : USFP
- JEITA, JEDEC : -
- Minimum Packing Quantity : 10,000 pcs./reel

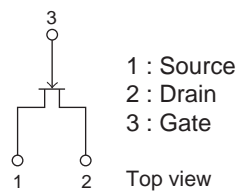
## Packing Type: TL



## Marking



## Electrical Connection



# TF408

## Electrical Characteristics at Ta=25°C

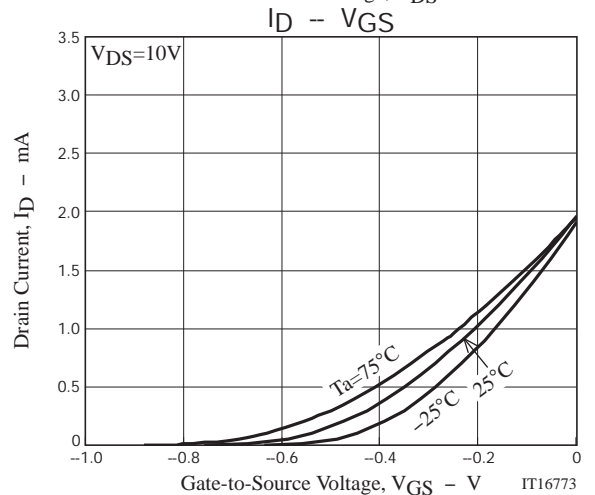
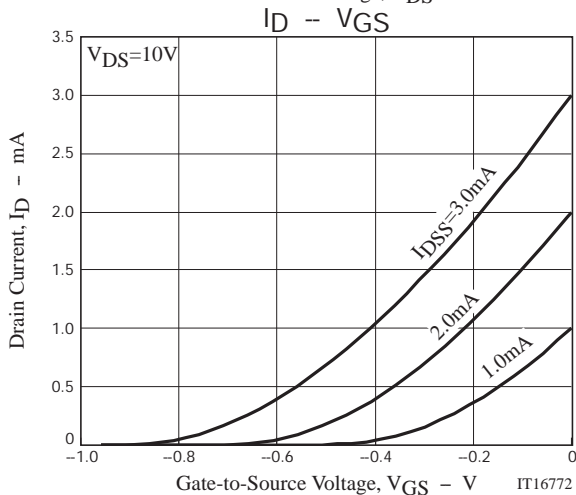
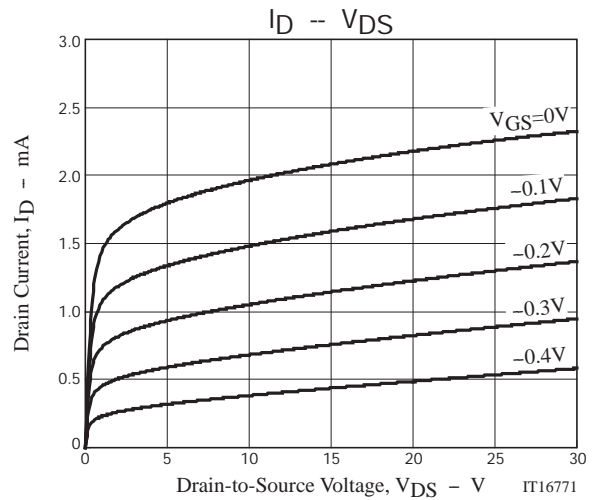
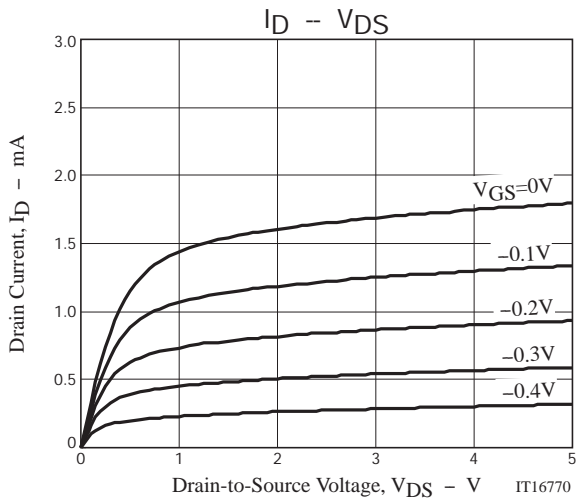
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	V(BR)GDS	IG=-10μA, VDS=0V	-30			V
Gate-to-Source Leakage Current	IGSS	VGS=-20V, VDS=0V			-1.0	nA
Cutoff Voltage	VGS(off)	VDS=10V, ID=1μA	-0.18	-0.60	-1.5	V
Drain Current	IDSS	VDS=10V, VGS=0V	0.6*		3.0*	mA
Forward Transfer Admittance	yfs	VDS=10V, VGS=0V, f=1kHz	3.0	5.0		mS
Input Capacitance	Ciss	VDS=10V, VGS=0V, f=1MHz			4	pF
Reverse Transfer Capacitance	Crss			1.1		pF

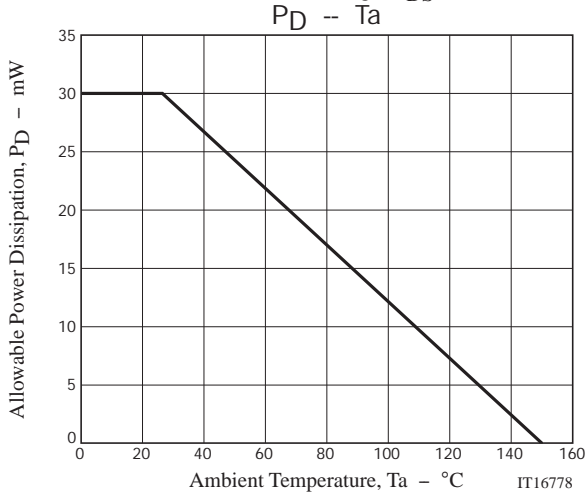
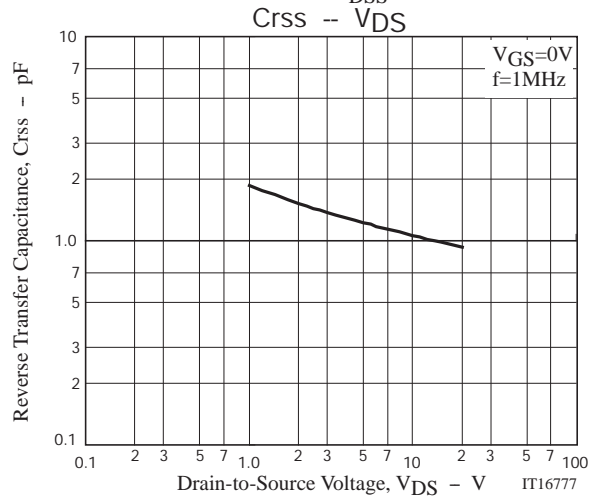
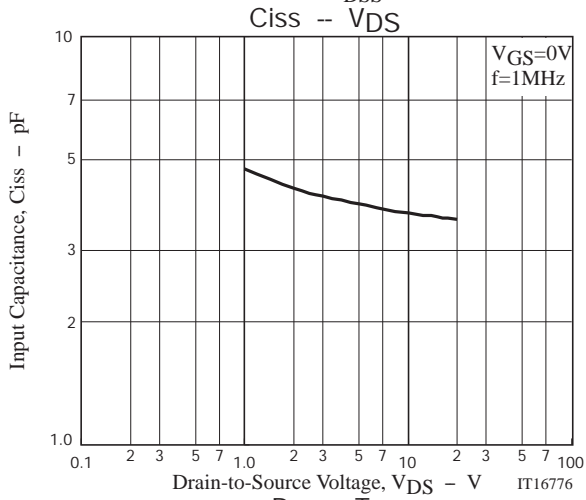
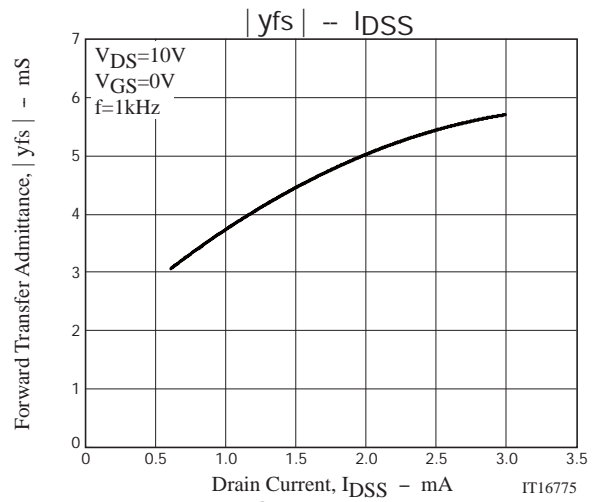
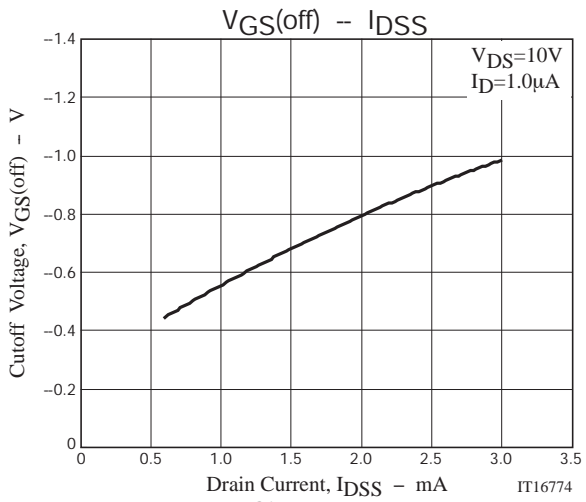
\* : The TF408 is classified by IDSS as follows : (unit : mA)

Rank	2	3
IDSS	0.6 to 1.5	1.2 to 3.0

## Ordering Information

Device	Package	Shipping	memo
TF408-2-TL-H	USFP	10,000pcs./reel	Pb Free and Halogen Free
TF408-3-TL-H	USFP	10,000pcs./reel	





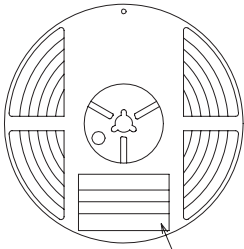
Taping Specification

TF408-2-TL-H, TF408-3-TL-H

1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
USFP	USFP	10,000	50,000	300,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

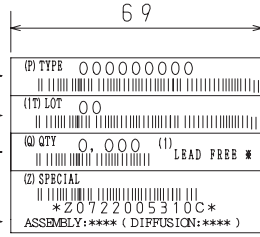
Packing method



Type No.  
LOT No.  
Quantity  
Origin

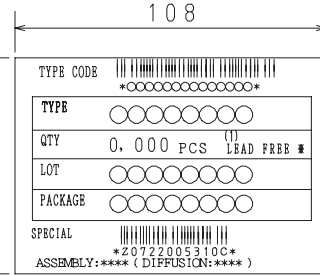
Reel label

Reel label, Inner box label  
(unit:mm)



Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.



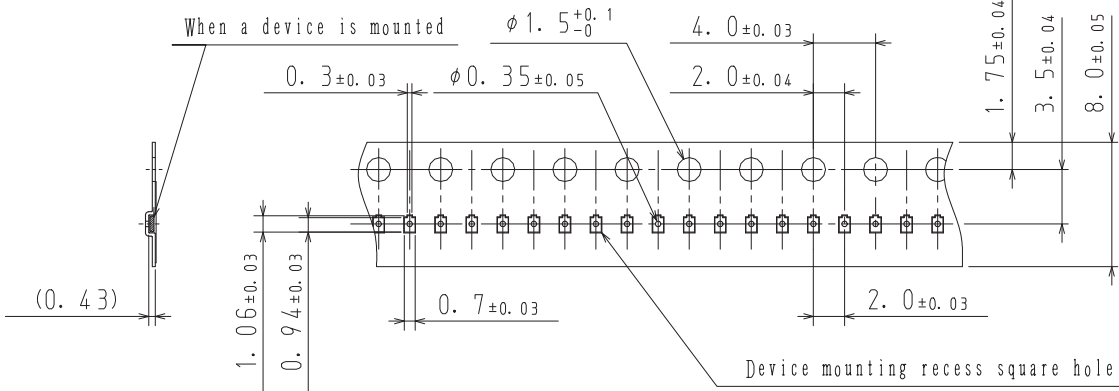
NOTE (1)

The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

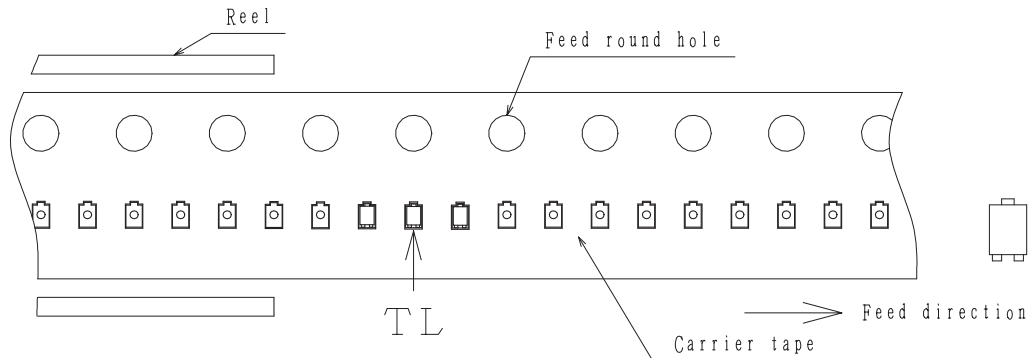
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction

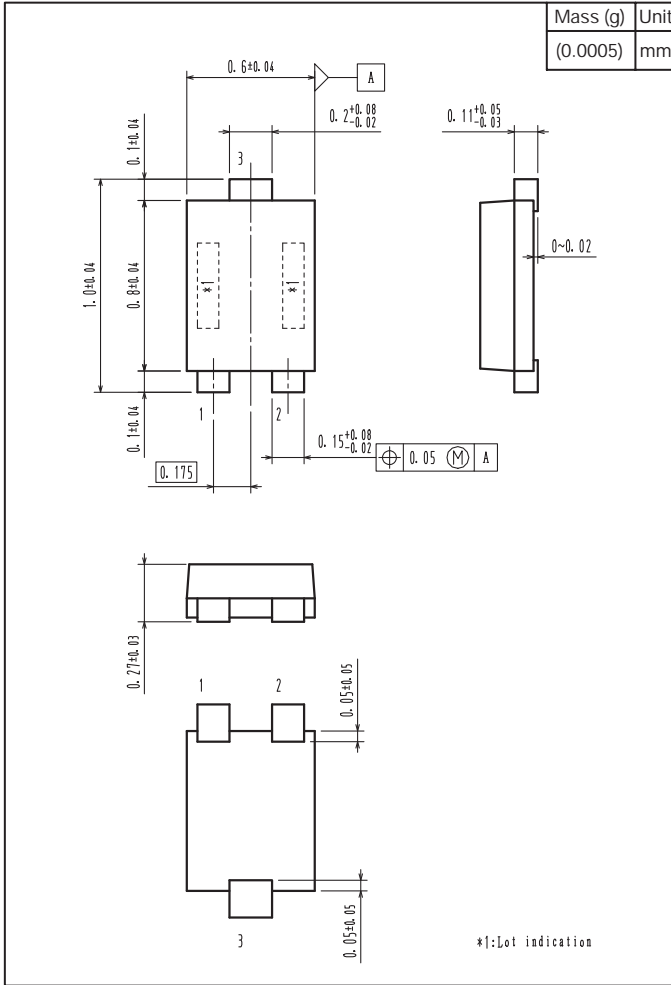


Those with one electrode terminal on the feed hole side.....TL

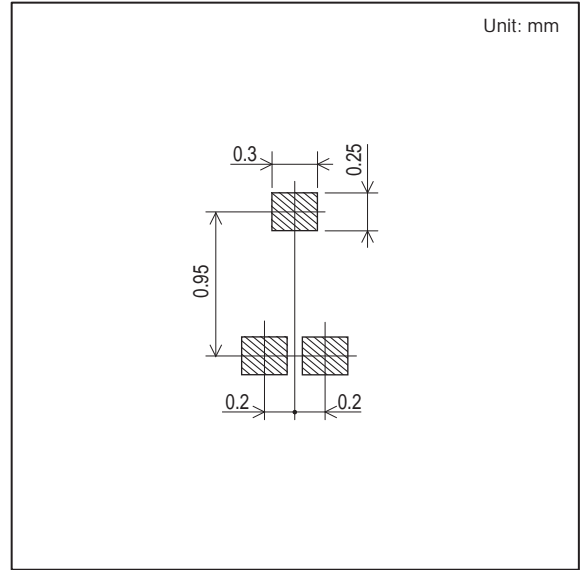
# TF408

## Outline Drawing

TF408-2-TL-H, TF408-3-TL-H



## Land Pattern Example



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