



ON Semiconductor®

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TF410

N-Channel JFET

40V, 50 to 130 μ A, 0.11mS, USFP

Applications

- Impedance conversion, infrared sensor applications

Features

- Ultrasmall package facilitates miniaturization in end products : 1.0mm $\times$ 0.6mm $\times$ 0.27mm (max 0.3mm)
- Small IGSS : max -500pA ($V_{GSS} = -20V$, $V_{DS} = 0V$)
- Small Ciss : typ. 0.7pF ($V_{DS} = 10V$, $V_{GS} = 0V$, $f = 1MHz$)
- Halogen free compliance

Specifications

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

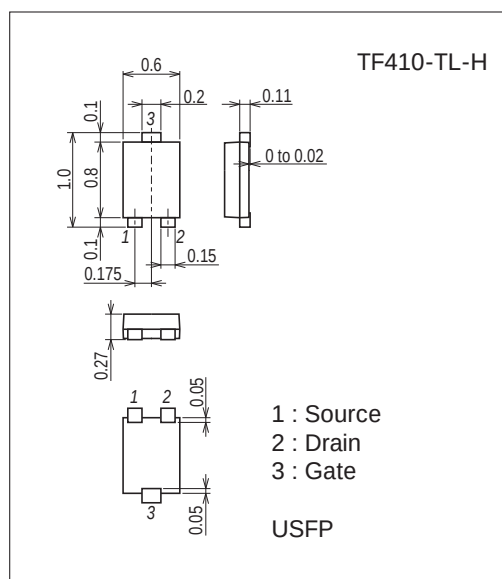
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		40	V
Gate-to-Drain Voltage	V_{GDS}		-40	V
Gate Current	I_G		10	mA
Drain Current	I_D		1	mA
Allowable Power Dissipation	P_D		30	mW
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

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)

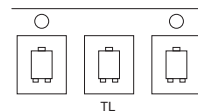
7055-003



Product & Package Information

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

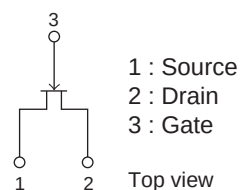
Packing Type: TL



Marking



Electrical Connection

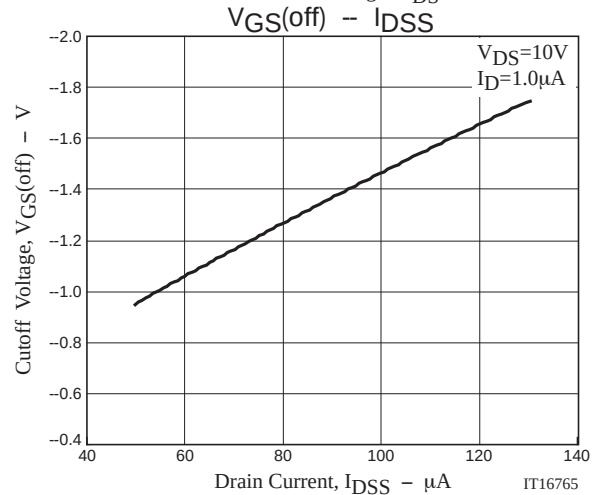
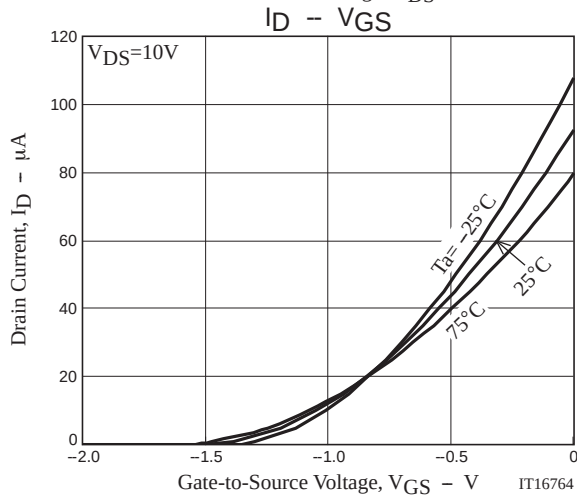
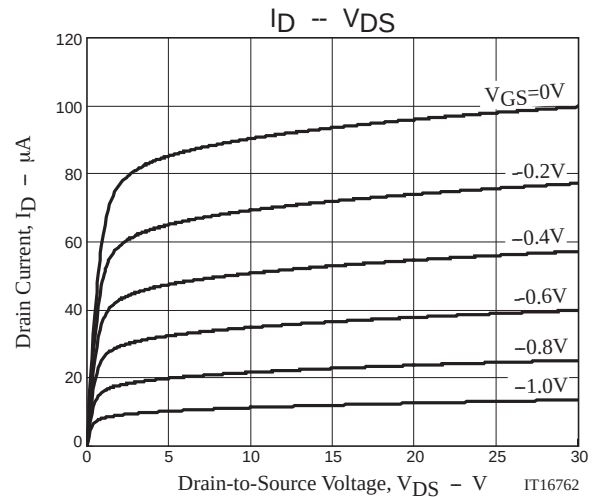
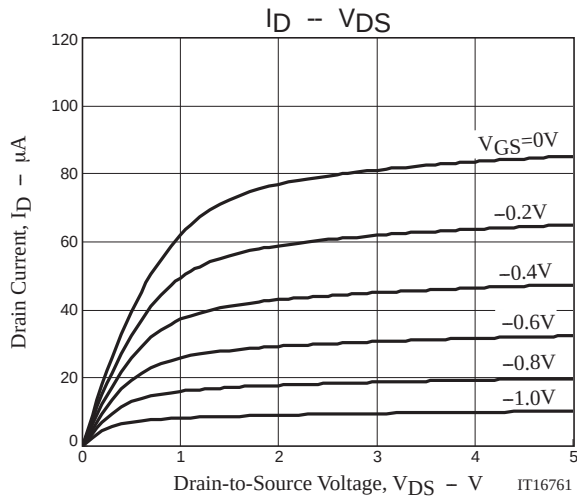


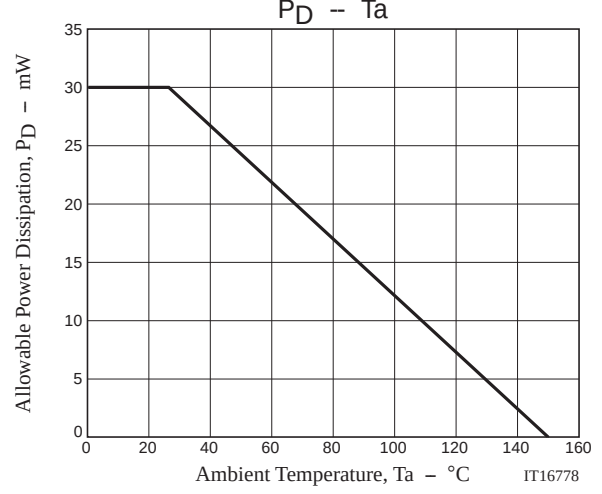
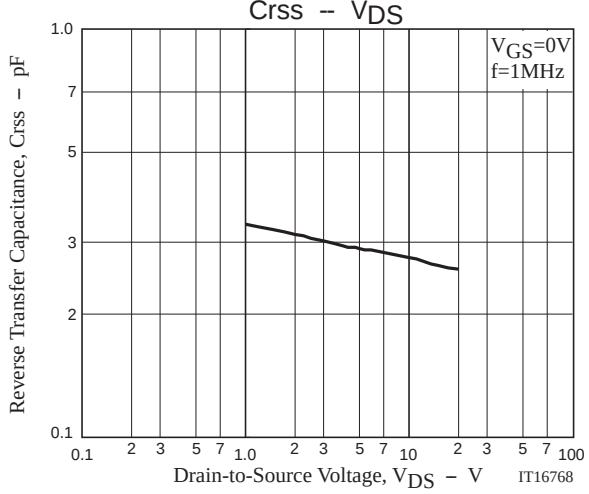
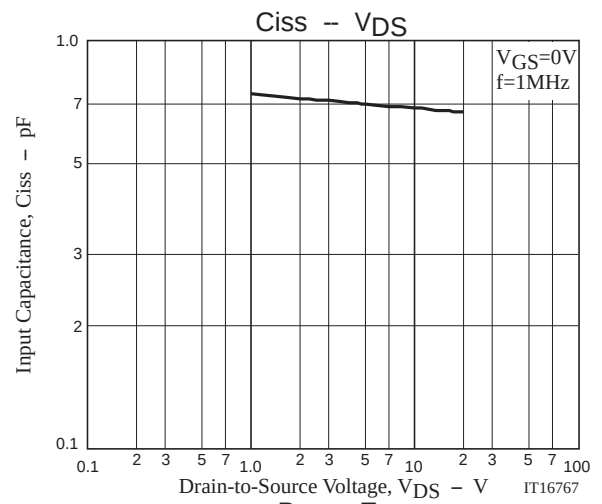
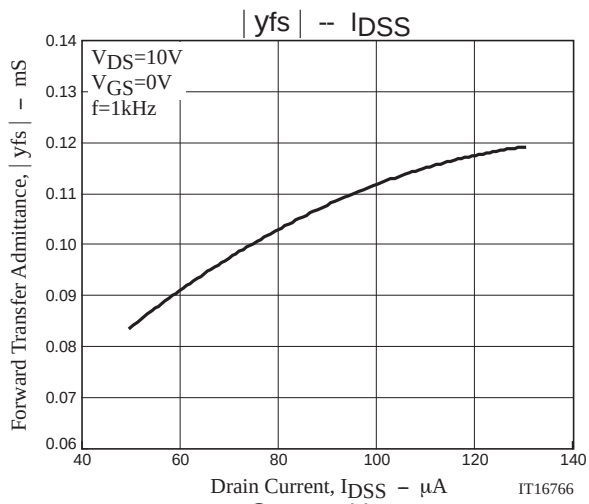
Electrical Characteristics at $T_a=25^{\circ}\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G=-10\mu\text{A}$, $V_{DS}=0\text{V}$	-40			V
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS}=-20\text{V}$, $V_{DS}=0\text{V}$			-500	pA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\mu\text{A}$		-1.4	-4.0	V
Drain Current	I_{DSS}	$V_{DS}=10\text{V}$, $V_{GS}=0\text{V}$	50		130	μA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10\text{V}$, $V_{GS}=0\text{V}$, $f=1\text{kHz}$	0.05	0.11		mS
Input Capacitance	C_{iss}	$V_{DS}=10\text{V}$, $V_{GS}=0\text{V}$, $f=1\text{MHz}$		0.7		pF
Reverse Transfer Capacitance	C_{rss}			0.3		pF

Ordering Information

Device	Package	Shipping	memo
TF410-TL-H	USFP	10,000pcs./reel	Pb Free and Halogen Free





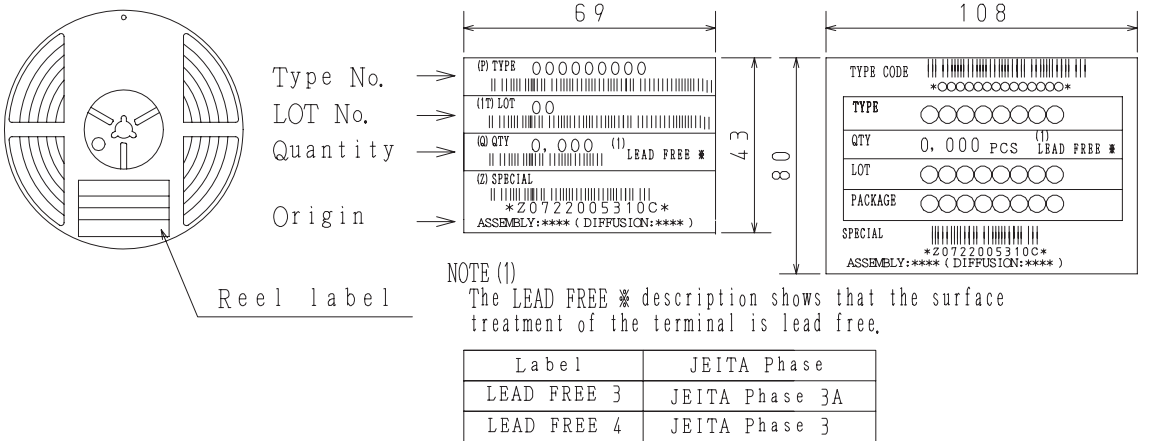
Taping Specification

TF410-TL-H

1. Packing Format

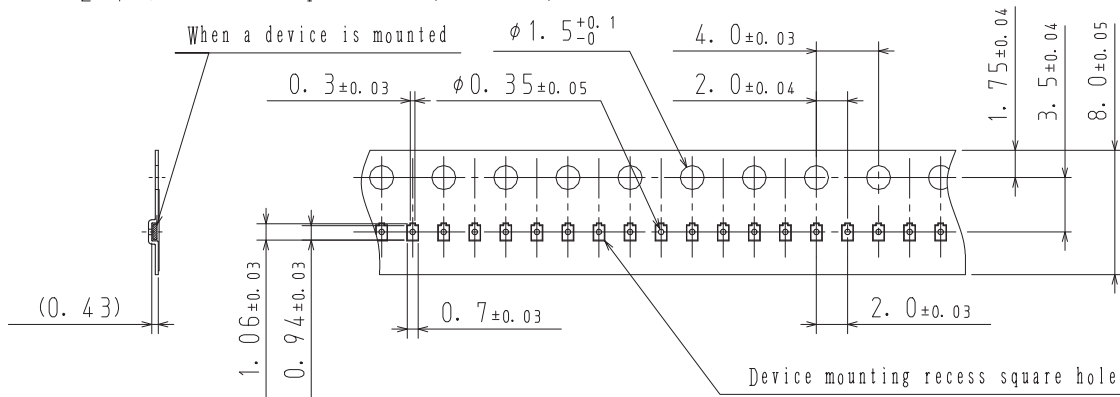
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
USFP	USFP	10,000	50,000	300,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method

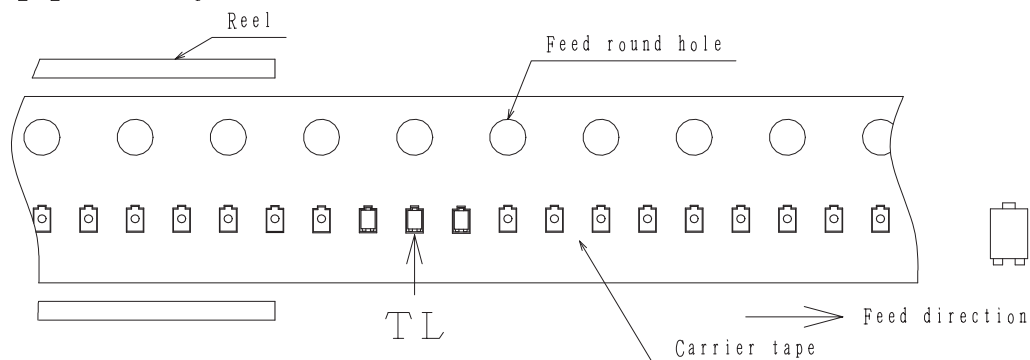


2. Taping configuration

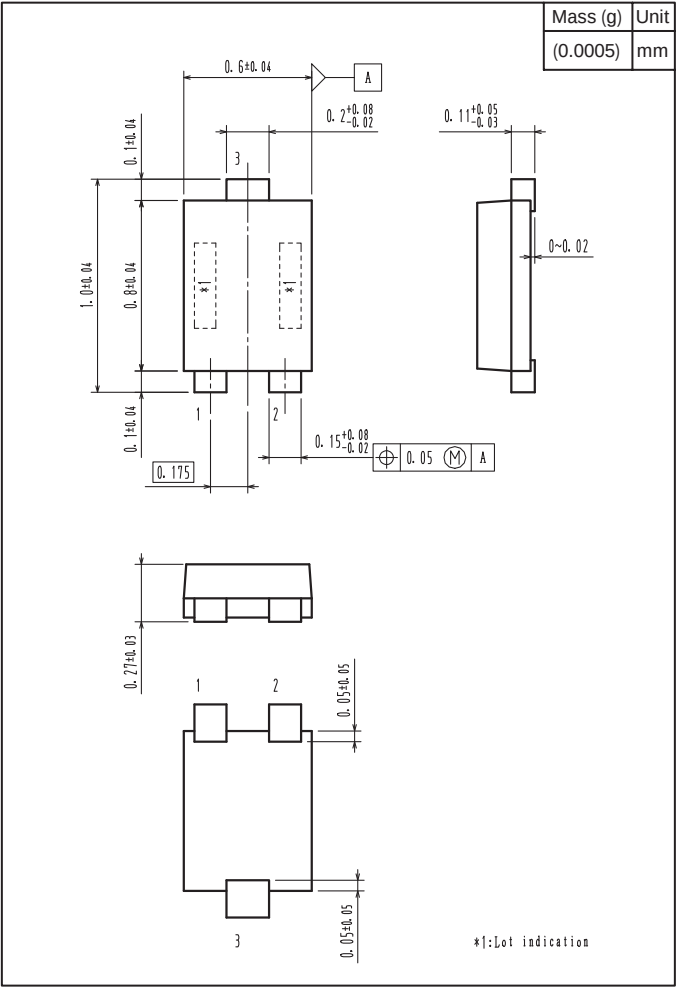
2-1. Carrier tape size (unit:mm)



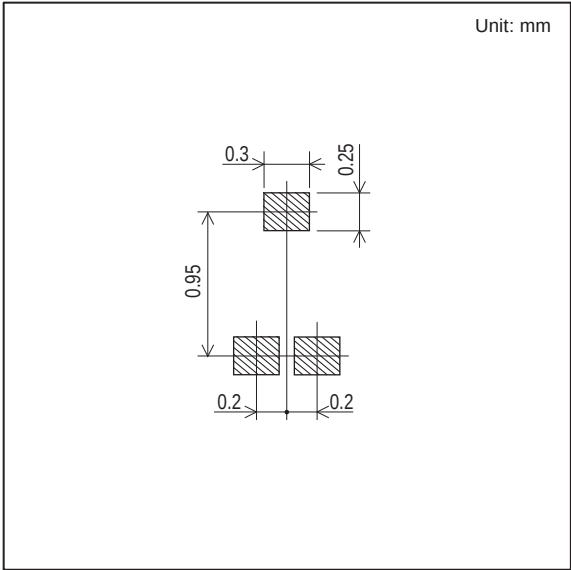
2-2. Device placement direction



Outline Drawing
TF410-TL-H



Land Pattern Example



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