



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

N-Channel Silicon Junction FET

TF410 — Impedance Converter, Infrared Sensor Applications

Applications

- Impedance conversion, infrared sensor applications

Features

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

Specifications

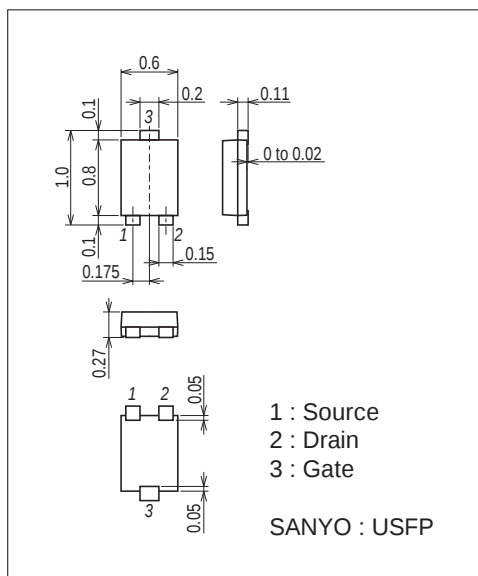
Absolute Maximum Ratings at $T_a=25^\circ C$

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	$^\circ C$

Package Dimensions

unit : mm (typ)

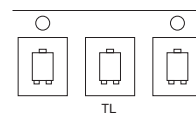
7055-003



Product & Package Information

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

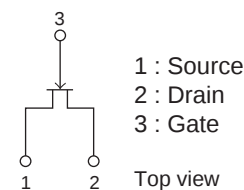
Packing Type: TL



Marking

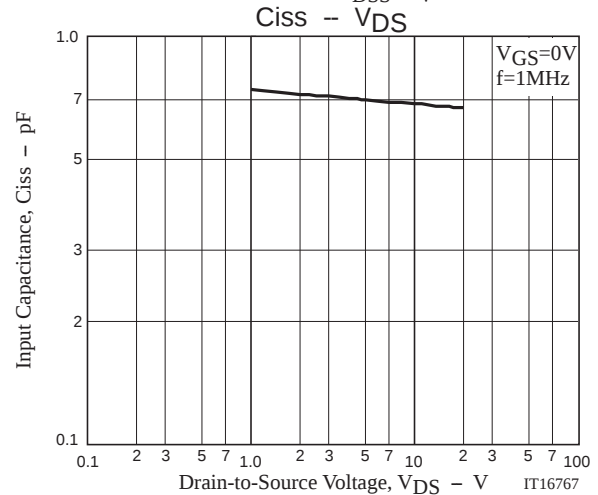
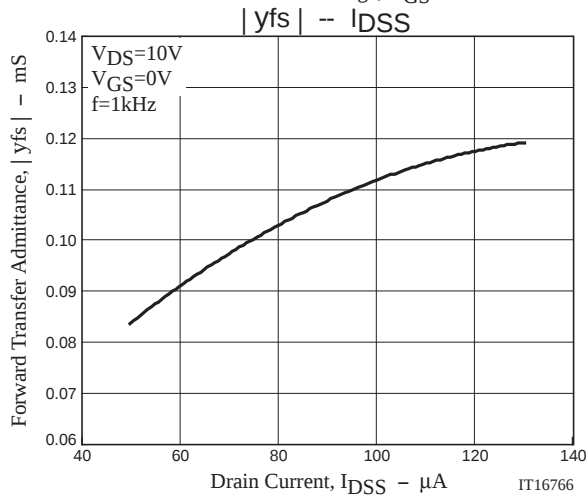
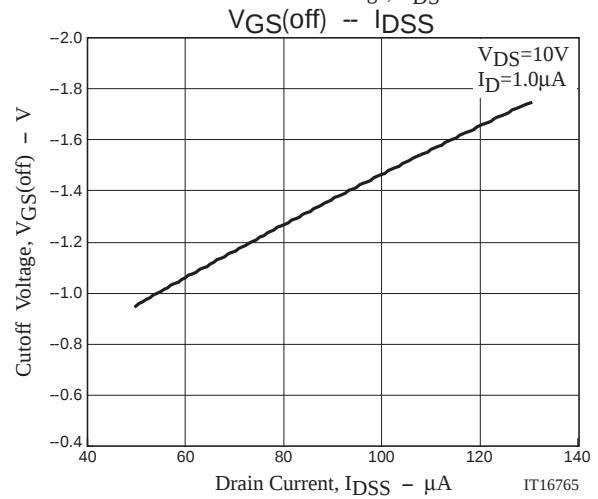
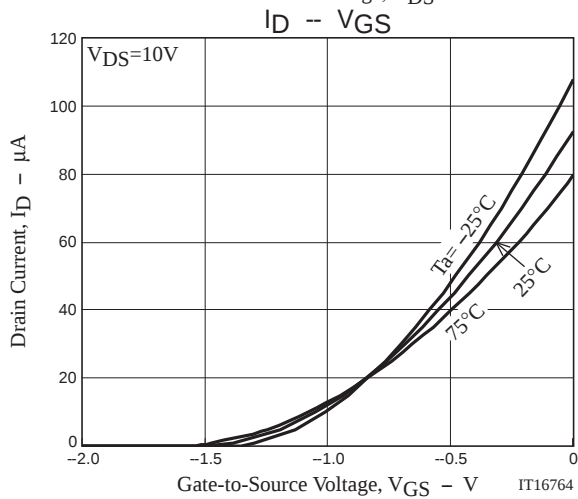
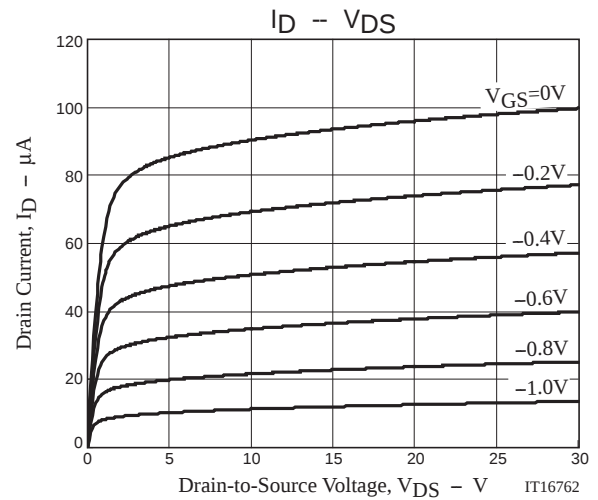
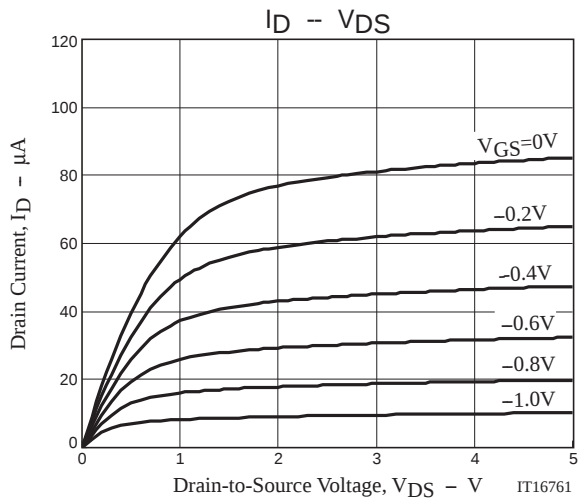


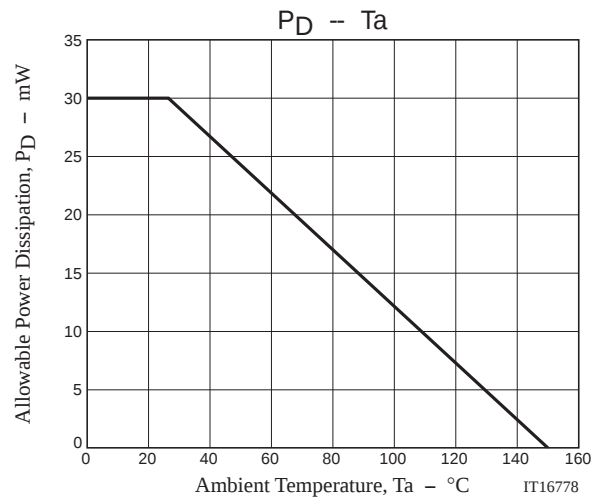
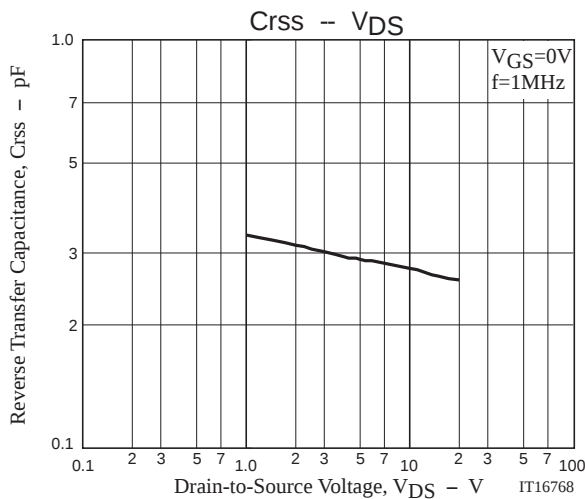
Electrical Connection



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





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