TF412S

N-Channel JFET 30V, 1.2 to 3.0mA, 5.0mS, SOT-883



http://onsemi.com

Features

- Small IGSS: max -1.0nA ($V_{GS} = -20V$, $V_{DS} = 0V$)
- Small Ciss: typ 4pF (V_{DS}=10V, V_{GS}=0V, f=1MHz)
- Ultrasmall package facilitates miniaturization in end products
- Halogen free compliance

Applications

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

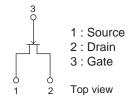
Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V _{DSX}	30	V
Gate-to-Drain Voltage	V _{GDS}	-30	V
Gate Current	IG	10	mA
Drain Current	ID	10	mA
Power Dissipation	PD	100	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

This product is designed to "ESD immunity < 200V*", so please take care when handling.

Electrical Connection



Marking



SOT-883



Ordering & Package Information

Device	Package	Shipping
TF412ST5G		2 222
Pb-free and	SOT-883	8,000
Halogen Free		pcs. / reel

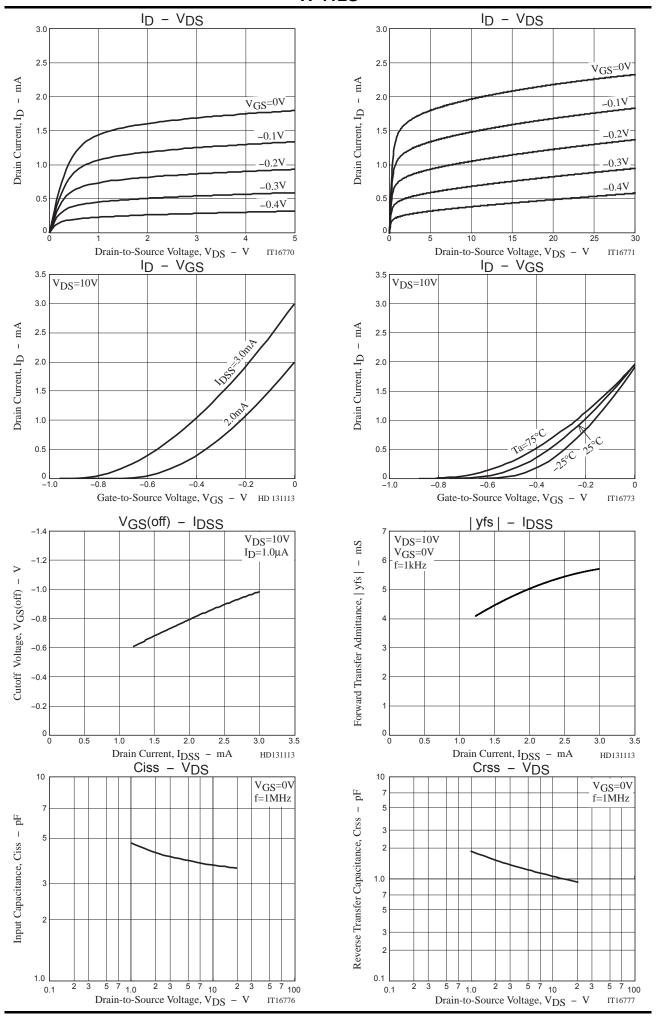
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

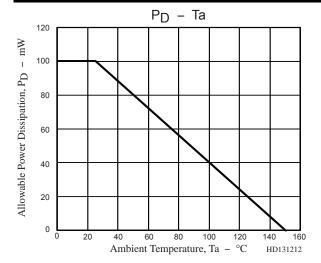
Electrical Characteristics at Ta = 25°C

Danamatas	Cumbal	Conditions		Value		1.1:4
Parameter	Symbol	Conditions	min	typ	max	Unit
Gate-to-Drain Breakdown Voltage	V _(BR) GDS	$I_{G} = -10\mu A, V_{DS} = 0V$	-30			V
Gate-to-Source Leakage Current	IGSS	$V_{GS} = -20V, V_{DS} = 0V$			-1.0	nA
Cutoff Voltage	V _{GS} (off)	$V_{DS} = 10V, I_D = 1\mu A$	-0.18	-0.80	-1.5	V
Drain Current	IDSS	V _{DS} = 10V, V _{GS} = 0V	1.2		3.0	mA
Forward Transfer Admittance	yfs	V _{DS} = 10V, V _{GS} =0V, f = 1kHz	3.0	5.0		mS
Input Capacitance	Ciss	V _{DS} = 10V, V _{GS} = 0V, f = 1MHz		4		pF
Reverse Transfer Capacitance	Crss	VDS 100, VGS 00,1 1111112		1.1		pF

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

^{*} Machine Model



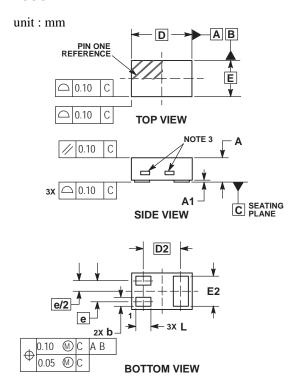


Package Dimensions

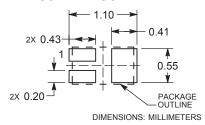
TF412ST5G

SOT-883 (XDFN3), 1.0x0.6, 0.35P

CASE 506CB **ISSUE A**



RECOMMENDED SOLDER FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

- NOTES:
 1. DIMENSIONING AND TOLERANCING PER
- ASME Y14.5M, 1994. CONTROLLING DIMENSION: MILLIMETERS 3. EXPOSED COPPER ALLOWED AS SHOWN

	MILLIMETERS		
DIM	MIN	MAX	
Α	0.340	0.440	
A1	0.000	0.030	
b	0.075	0.200	
D	0.950	1.075	
D2	0.620 BSC		
е	0.350 BSC		
Е	0.550	0.675	
E2	0.425	0.550	
L	0.170	0.300	

GENERIC MARKING DIAGRAM*



XX = Specific Device Code

= Date Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G", may or not be present.

ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or quarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ON Semiconductor:

TF412ST5G