2N3821 | 2N3822 | 2N3823

N-CHANNEL JFETS - 1

KEY FEATURES

- JAN/JANTX/JANTXV STANDARD PRODUCTS
- QUALIFIED PER MIL-PRF-19500/375
- LOW ON RESISTANCE
- FAST SWITCHING
- HIGH OFF ISOLATION
- LOW FREQUENCY, LOW NOISE
- VHF AMPLIFIERS, SMALL SIGNAL AMPLIFIERS
- SECOND SOURCE FOR MICROSEMI

Part Number	Package	19500/	Breakdown Voltage	Current	R_{iso}
2N3821	TO-18	375	50V	10mA	$10^{10}\ \Omega$
2N3822	TO-18	375	50V	10mA	$10^{10}\ \Omega$
2N3823	TO-18	375	30V	10mA	$10^{10}\ \Omega$

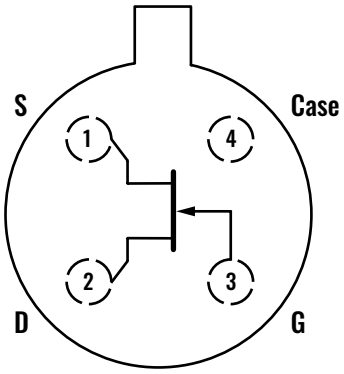
ABSOLUTE MAXIMUM RATINGS

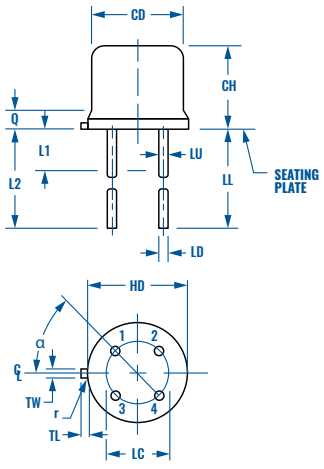
Gate-Source Voltage	-30V	Storage Temperature	-65 to 200°C
Gate Current	10mA	Operating Junction Temperature	-65 to 200°C
Lead Temperature (1/16 from case, 10 sec)	300°C	Power Dissipation Derating	300mW 1.7mW/°C to TC ≥ 25°C

ORDERING GUIDE

JAN2N3821	JANTX2N3821	JANTXV2N3821
JAN2N3822	JANTX2N3822	JANTXV2N3822
JAN2N3823	JANTX2N3823	JANTXV2N3823

TO-72 PACKAGE OUTLINE & PIN CONNECTIONS





Ltr	Dimensions			
	Inches		mm	
	Min.	Max.	Min.	Max.
CD	0.178	0.195	4.52	4.95
CH	0.170	0.210	4.32	5.33
HD	0.209	0.230	5.31	5.84
L1		0.050		1.27
L2	0.250		6.35	
LC	0.100 TP		2.54 TP	
LD	0.016	0.021	0.41	0.53
LL	0.500	0.750	2.70	19.05
LU	0.016	0.019	0.41	0.48
Q		0.040		1.02
r		0.007		0.18
TL	0.028	0.048	0.71	1.22
TW	0.036	0.046	0.91	1.17
α	45° TP			

ELECTRICAL SPECIFICATIONS

Typical @ 25°C unless otherwise noted

Parameter		Symbol	Min.	Max.	Unit
Gate-Source Breakdown Voltage V_{DS} =0Vdc, I_g = 1.0µAdc	2N3821 2N3822 2N3823	$V_{(BR)GSS}$	50 50 30		Vdc
Gate-Source Cutoff Voltage V_{DS} = 15Vdc, ID = 0.5nAdc	2N3821 2N3822 2N3823	$V_{GS(on)}$		4.0 6.0 8.0	Vdc Vdc Vdc
Gate Reverse Current V_{DS} = 0Vdc, V_{GS} = 30Vdc V_{DS} = 0Vdc, V_{GS} = 30Vdc V_{DS} = 0Vdc, V_{GS} = 20Vdc	2N3821 2N3822 2N3823	I_{GSS}		0.1 0.1 0.5	nA nA nA
Drain Current V_{DS} = 15Vdc, V_{GS} = 0Vdc	2N3821 2N3822 2N3823	$I_{D(off)}$	0.5 2.0 4.0	2.5 10.0 20.0	mA mA mA
Small-signal, common-source, short-circuit, forward transadmittance V_{DS} = 15Vdc; V_{GS} = 0Vdc; f = 1kHz	2N3821 2N3822 2N3823	$\|y_{fs}\|1$	1,500 3,000 3,500	4,500 6,500 6,500	µs µs µs
Small-signal, commonsense, short-circuit, forward transmittance V_{DS} = 15Vdc; V_{GS} = 0Vdc; f = 1kHz	2N3821 2N3822 2N3823	$\|y_{fs}\|2$		6,750 9,750 9,750	µs µs µs
Small-signal common-source, short-circuit, forward transmittance V_{DS} = 15Vdc; V_{GS} = 0 |yfs|3 f = 100 MHz f = 100 MHz f = 200 MHz	2N3821 2N3822 2N3823	$\|y_{fs}\|3$		1,500 3,000 3,200	µs µs µs
Small Signal, Common Source Reverse Transfer Capacitance V_{GS} = 0Vdc V_{DS} = 15Vdc, 100kHz ≤ f ≤ 1.0MHz	2N3821 2N3822 2N3823	C_{rss}		3 3 2	pF
Small Signal, Common Source Short-Circuit Input Capacitance V_{GS} = 0Vdc V_{DS} = 15Vdc, 100kHz ≤ f ≤ 1.0MHz		C_{iss}		6	pF
Common-source spot noise V_{DS} = 15Vdc; V_{GS} = 0Vdc; R_G = 1 MΩ f = 10Hz 2N3821, 2N3822 f = 1kHz 2N3821, 2N3822, 2N3823		NF_1		5.0 2.5	dB dB
Common-source spot noise V_{DS} = 15Vdc; V_{GS} = 0Vdc; R_G = 1 kΩ; f = 105MHz	2N3823	NF_2		2.5	dB