

### 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
2N3821	T0-72	375	50V	10mA	10 $\Omega$
2N3822	T0-72	375	50V	10mA	10 $\Omega$

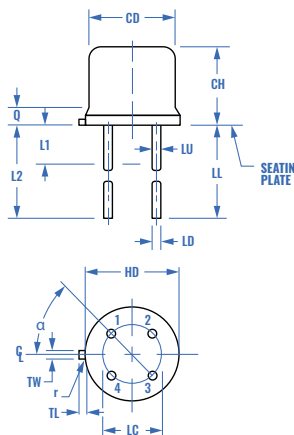
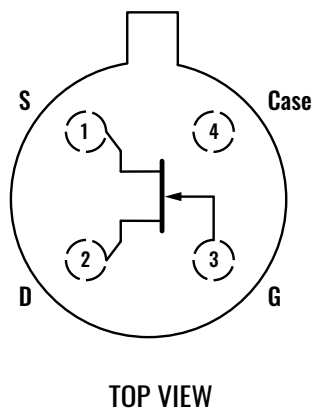
### ABSOLUTE MAXIMUM RATINGS

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 $\geq$ 25°C

### ORDERING GUIDE

JAN2N3821	JANTX2N3821	JANTXV2N3821
JAN2N3822	JANTX2N3822	JANTXV2N3822

### 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
$\alpha$	45° TP			

**ELECTRICAL SPECIFICATIONS**

Typical @ 25°C unless otherwise noted

Parameter		Symbol	Min.	Max.	Unit
Gate-Source Breakdown Voltage $V_{DS} = 0Vdc, I_g = 1.0\mu Adc$	2N3821 2N3822	$V_{(BR)GSS}$	50 50		Vdc
Gate-Source Cutoff Voltage $V_{DS} = 15Vdc, I_D = 0.5nAdc$	2N3821 2N3822	$V_{GS(off)}$		4.0 6.0	Vdc
Gate Reverse Current $V_{DS} = 0Vdc, V_{GS} = 30Vdc$ $V_{DS} = 0Vdc, V_{GS} = 30Vdc$	2N3821 2N3822	$I_{GSS}$		0.1 0.1	nA
Drain Current $V_{DS} = 15Vdc, V_{GS} = 0Vdc$	2N3821 2N3822	$I_{D(off)}$	0.5 2.0	2.5 10.0	mA
Small-signal, common-source, short-circuit, forward transmittance $V_{DS} = 15Vdc; V_{GS} = 0Vdc; f = 1kHz$	2N3821 2N3822	$ y_{fs} 1$	1,500 3,000	4,500 6,500	$\mu s$
Small-signal, common sense, short-circuit, forward transmittance $V_{DS} = 15Vdc; V_{GS} = 0Vdc; f = 1kHz$	2N3821 2N3822	$ y_{fs} 2$		6,750 9,750	$\mu s$ $\mu s$
Small-signal common-source, short-circuit, forward transmittance $V_{DS} = 15Vdc; V_{GS} = 0  y_{fs} 3$ $f = 100 MHz$ $f = 100 MHz$	2N3821 2N3822	$ y_{fs} 3$		1,500 3,000	$\mu s$
Small Signal, Common Source Reverse Transfer Capacitance $V_{GS} = 0Vdc, V_{DS} = 15Vdc, 100kHz \leq f \leq 1.0MHz$	2N3821 2N3822	$C_{rss}$		3 3	pF
Small Signal, Common Source Short-Circuit Input Capacitance $V_{GS} = 0Vdc, V_{DS} = 15Vdc, 100kHz \leq f \leq 1.0MHz$		$C_{iss}$		6	pF
Common-source spot noise $V_{DS} = 15Vdc; V_{GS} = 0Vdc; R_G = 1 M\Omega, f = 10Hz$ $V_{DS} = 15Vdc; V_{GS} = 0Vdc; R_G = 1 M\Omega, f = 1kHz$		$NF_1$		5.0 2.5	dB