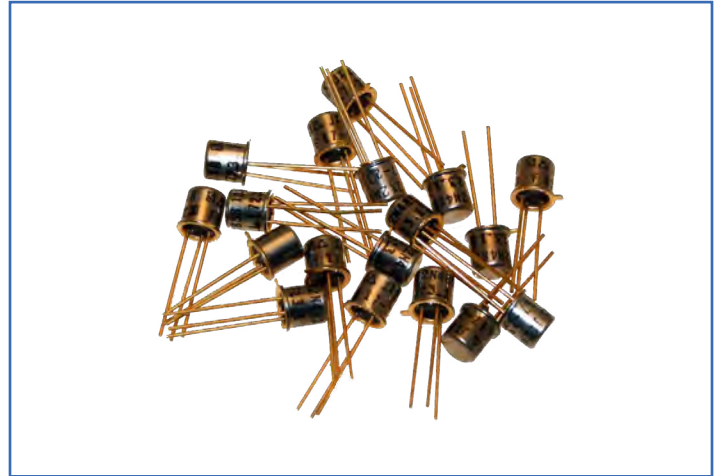


KEY FEATURES

- 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	T0-72	375	50V	10mA	$10^{10} \Omega$
2N3822	T0-72	375	50V	10mA	$10^{10} \Omega$
2N3823	T0-72	375	30V	10mA	$10^{10} \Omega$

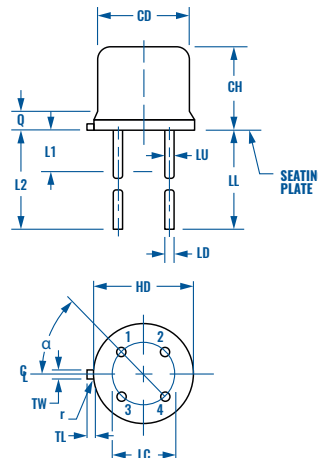
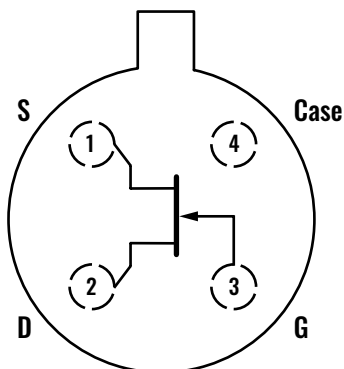
ABSOLUTE MAXIMUM RATINGS

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 $V_{DS} = 0Vdc, I_g = 1.0\mu Adc$	2N3821 2N3822 2N3823	$V_{(BR)GSS}$	50 50 30		Vdc
Gate-Source Cutoff Voltage $V_{DS} = 15Vdc, I_D = 0.5nAdc$	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 $V_{DS} = 15Vdc; V_{GS} = 0$ $y_{fs} _3$ $f = 100 MHz$ $f = 100 MHz$ $f = 200 MHz$	2N3821 2N3822 2N3823	$ y_{fs} _3$		1,500 3,000 3,200	μS μS μS
Small Signal, Common Source Reverse Transfer Capacitance $V_{GS} = 0Vdc, V_{DS} = 15Vdc, 100kHz \leq f \leq 1.0MHz$	2N3821 2N3822 2N3823	C_{rss}		3 3 2	pF
Small Signal, Common Source Short-Circuit Input Capacitance $V_{GS} = 0Vdc, V_{DS} = 15Vdc, 100kHz \leq f \leq 1.0MHz$		C_{iss}		6	pF
Common-source spot noise $V_{DS} = 15Vdc; V_{GS} = 0Vdc; R_G = 1 M\Omega$ $f = 10Hz$ 2N3821, 2N3822 $f = 1kHz$ 2N3821, 2N3822, 2N3823		NF_1		5.0 2.5	dB dB
Common-source spot noise $V_{DS} = 15Vdc; V_{GS} = 0Vdc; R_G = 1 k\Omega; f = 105MHz$	2N3823	NF_2		2.5	dB