Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Microsemi LAWRENCE

TECHNICAL DATA

N-CHANNEL J-FET DEPLETION MODE

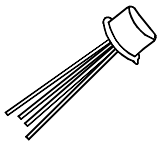
Qualified per MIL-PRF-19500/375

Devices			*Qualified Level*
2N3821	**2N3822**	**2N3823**	**JANTX JANTXV**

MAXIMUM RATINGS

Parameters / Test Conditions	Symbol	2N3821 2N3822	2N3823	Unit
Gate-Source Voltage	V_{GSR}	50	30	V
Drain-Source Voltage	V_{DS}	50	30	V
Drain-Gate Voltage	V_{DG}	50	30	V
Gate Current	I_{GF}	10		mA
Power Dissipation $T_A = +25^0C$ (1)	P_T	300		mW
Operating Junction & Storage Temperature Range	T_j, T_{stg}	-55 to +200		^0C

(1) Derate linearly 1.7 mW/^{0}C for T_A +25 ^{0}C.



TO-72*
(TO-206AF)

*See appendix A for package outline

ELECTRICAL CHARACTERISTICS ($T_A = 25^0C$ unless otherwise noted)

Parameters / Test Conditions		Symbol	Min.	Max.	Units
Gate-Source Breakdown Voltage					
$V_{DS} = 0$, $I_G = 1.0$ µAdc	2N3821, 2N3822	$V_{(BR)GSSR}$	50		Vdc
	2N3823		30		
Gate Reverse Current					
$V_{DS} = 0$, $V_{GS} = 30$ Vdc	2N3821, 2N3822	I_{GSSR}		0.1	ηA
$V_{DS} = 0$, $V_{GS} = 20$ Vdc	2N3823			0.5	
Zero-Gate-Voltage Drain Current					
$V_{GS} = 0$, $V_{DS} = 15$ Vdc	2N3821	I_{DSS}	0.5	2.5	
	2N3822		2.0	10	mA
	2N3823		4.0	20	
Gate-Source Voltage					
$V_{DS} = 15$ Vdc, $I_D = 50$ µAdc	2N3821		0.5	2.0	
$V_{DS} = 15$ Vdc, $I_D = 200$ µAdc	2N3822	V_{GS}	1.0	4.0	Vdc
$V_{DS} = 15$ Vdc, $I_D = 400$ µAdc	2N3823		1.0	7.5	
Gate-Source Cutoff Voltage					
$V_{DS} = 15$ Vdc, $I_D = 0.5$ ηAdc	2N3821			4.0	
	2N3822	$V_{GS(off)}$		6.0	Vdc
	2N3823			8.0	

Parameters / Test Conditions		Symbol	Min.	Max.	Units
Small-Signal Common Source, Short-Circuit Forward Transfer Admittance					
V_{GS} = 0, V_{DS} = 15 Vdc, f = 1.0 kHz	2N3821	$\|y_{fs}\|^1$	1500	4500	µS
	2N3822		3000	6500	
	2N3823		3500	6500	
Small-Signal Common Source, Short-Circuit Output Admittance					
V_{GS} = 0, V_{DS} = 15 Vdc, f = 1.0 kHz	2N3821	$\|y_{os}\|$		10	µS
	2N3822			20	
	2N3823			35	
Small-Signal, Common-Source Short-Circuit Input Capacitance					
V_{GS} = 0, V_{DS} = 15 Vdc, 100 kHz ≤ f ≤ 1.0 MHz		C_{iss}		6.0	pF
Small-Signal, Common-Source Reverse Transfer Capacitance					
V_{DS} = 15 Vdc, V_{GS} = 0, 100 kHz ≤ f ≤ 1.0 MHz		C_{rss}			pF
	2N3821, 2N3822			3.0	
	2N3823			2.0	
Small-Signal Common Source, Short-Circuit Forward Transfer Admittance					
V_{GS} = 0, V_{DS} = 15 Vdc, f = 100 MHz	2N3821	$\|y_{fs}\|^2$	1500		µS
f = 100 MHz	2N3822		3000		
f = 200 MHz	2N3823		3200		
Small-Signal, Common-Source Short-Circuit Input Conductance					
V_{GS} = 0, V_{DS} = 15 Vdc, f = 200 MHz	2N3823 (only)	g_{is}		800	µS
Small-Signal, Common-Source Short-Circuit Output Conductance					
V_{GS} = 0, V_{DS} = 15 Vdc, f = 200 MHz	2N3823 (only)	g_{os}		200	µS
Common Source Spot Noise Figure					
V_{GS} = 0, V_{DS} = 15 Vdc, R_G = 1MΩ					
f = 10 Hz	2N3821, 2N3822	NF^1		5.0	dB
f = 1.0 kHz	2N3821, 2N3822, 2N3823			2.0	
Common Source Spot Noise Figure					
V_{GS} = 0, V_{DS} = 15 Vdc, R_G = 1kΩ		NF^2			dB
f = 105 MHz	2N3823 (only)			2.5	