INTERSIL

2N4220 - 2N4222
N-Channel JFET

FEATURES

- $C_{rss} < 2$ pF
- Moderately High Forward Transconductance

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ABSOLUTE MAXIMUM RATINGS

@ 25°C (unless otherwise noted)

Maximum Temperatures

Storage Temperature	−65°C to +200°C
Operating Junction Temperature	+200°C
Lead Temperature (Soldering, 10 sec time limit)	+260°C

Maximum Power Dissipation

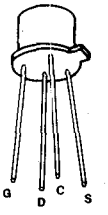
Device Dissipation @ Free Air Temperature	300 mW
Linear Derating	1.7 mW/°C

Maximum Voltages & Current

V_{GS}	Gate to Source Voltage	−30 V
V_{GD}	Gate to Drain Voltage	−30 V
I_G	Gate Current	10 mA

PIN CONFIGURATION

TO-72



CHIP TOPOGRAPHY

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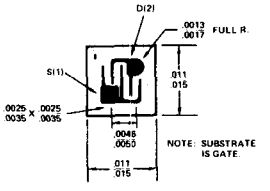

ORDERING INFORMATION

TO-72	WAFER	DICE
2N4220	2N4220/W	2N4220/D
2N4221	2N4221/W	2N4221/D
2N4222	2N4222/W	2N4222/D

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

PARAMETER		2N4220		2N4221		2N4222		UNIT	TEST CONDITIONS	
		MIN	MAX	MIN	MAX	MIN	MAX			
I_{GSS}	Gate Reverse Current		−0.1		−0.1		−0.1	nA	$V_{GS} = -15$ V, $V_{DS} = 0$	
			−0.1		−0.1		−0.1	μA		150°C
BV_{GSS}	Gate-Source Breakdown Voltage	−30		−30		−30		V	$I_G = -10$ μA, $V_{DS} = 0$	
$V_{GS(off)}$	Gate-Source Cutoff Voltage		−4		−6		−8		$V_{DS} = 15$ V, $I_D = 0.1$ nA	
V_{GS}	Gate-Source Voltage	−0.5	−2.5	−1	−5	−2	−6	V	$V_{DS} = 15$ V, $I_D = ( )$	
		(50)	(50)	(200)	(200)	(500)	(500)	(μA)		
I_{DSS}	Saturation Drain Current (Note 3)	0.5	3	2	6	5	15	mA	$V_{DS} = 15$ V, $V_{GS} = 0$	
g_{fs}	Common-Source Forward Transconductance (Note 3)	1000	4000	2000	5000	2500	6000	μmho	$V_{DS} = 15$ V, $V_{GS} = 0$	f = 1 kHz
$\lvert y_{fs} \rvert$	Common-Source Forward Transadmittance	750		750		750				f = 100 MHz
g_{os}	Common-Source Output Conductance (Note 3)		10		20		40			f = 1 kHz
C_{iss}	Common-Source Input Capacitance		6		6		6	pF		f = 1 MHz
C_{rss}	Common-Source Reverse Transfer Capacitance		2		2		2			