

NJ32 Process

Silicon Junction Field-Effect Transistor

• General Purpose Amplifier

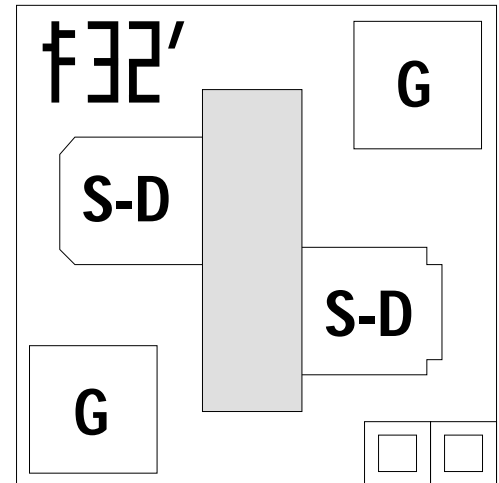
Absolute maximum ratings at TA = 25 °C

Gate Current, I _G	10 mA
Operating Junction Temperature, T _J	+150°C
Storage Temperature, T _S	- 65°C to +175°C

Devices in this Databook based on the NJ32 Process.

Datasheet

2N3821, 2N3822
2N3823, 2N3824
2N4222, 2N4222A



Die Size = 0.018" X 0.018"
All Bond Pads = 0.004" Sq.
Substrate is also Gate.

At 25°C free air temperature:

Static Electrical Characteristics

		NJ32 Process					
		Min	Typ	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	V _{(BR)GSS}	- 25	- 50		V	I _G = - 1 μA, V _{DS} = 0V	
Reverse Gate Leakage Current	I _{GSS}		- 10	- 100	pA	V _{GS} = - 15V, V _{DS} = 0V	
Drain Saturation Current (Pulsed)	I _{DSS}	1		22	mA	V _{DS} = 15V, V _{GS} = 0V	
Gate Source Cutoff Voltage	V _{GS(OFF)}	- 0.5		- 6	V	V _{DS} = 15V, I _D = 1 nA	

Dynamic Electrical Characteristics

Forward Transconductance	g _{fs}		4		mS	V _{DS} = 15V, V _{GS} = 0V	f = 1 kHz
Input Capacitance	C _{iss}		6	7.0	pF	V _{DS} = 15V, V _{GS} = 0V	f = 1 MHz
Feedback Capacitance	C _{rss}		1.3	3	pF	V _{DS} = 15V, V _{GS} = 0V	f = 1 MHz
Equivalent Noise Voltage	e _N		7		nV/√HZ	V _{DS} = 10V, I _D = 5 mA	f = 1 kHz

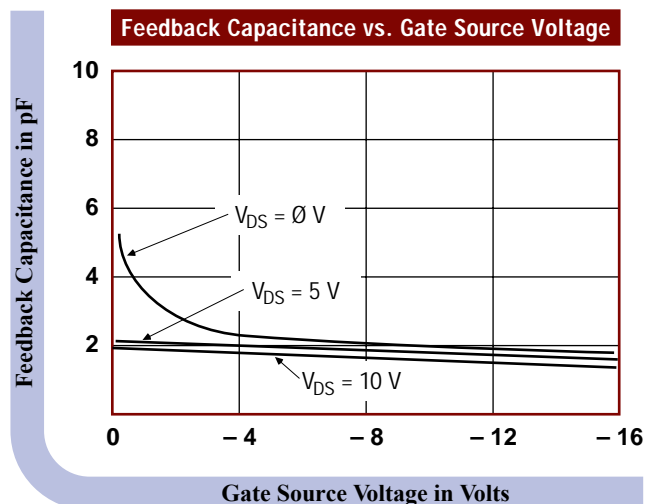
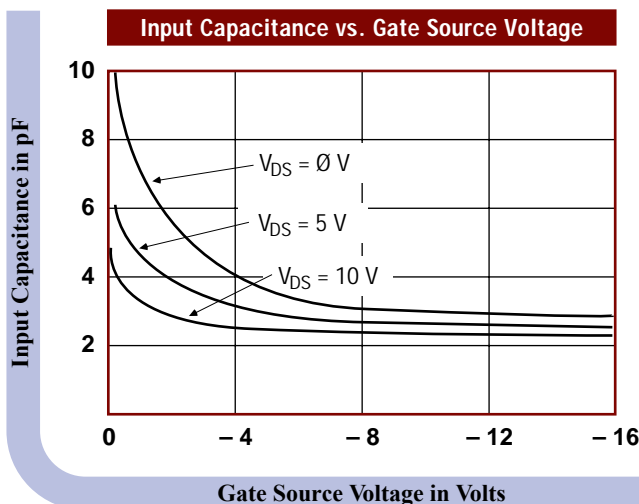
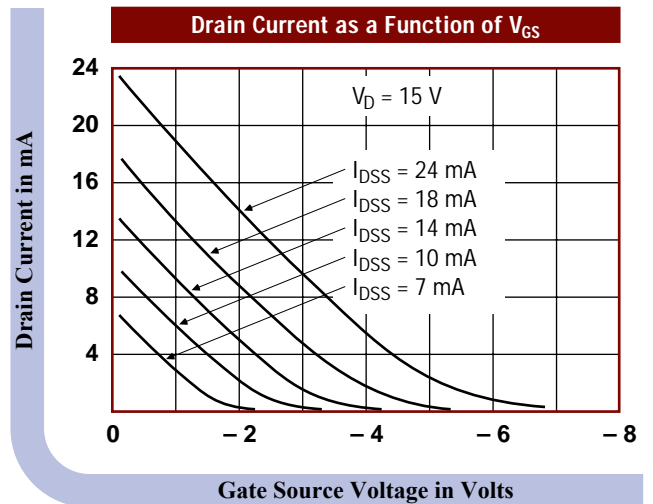
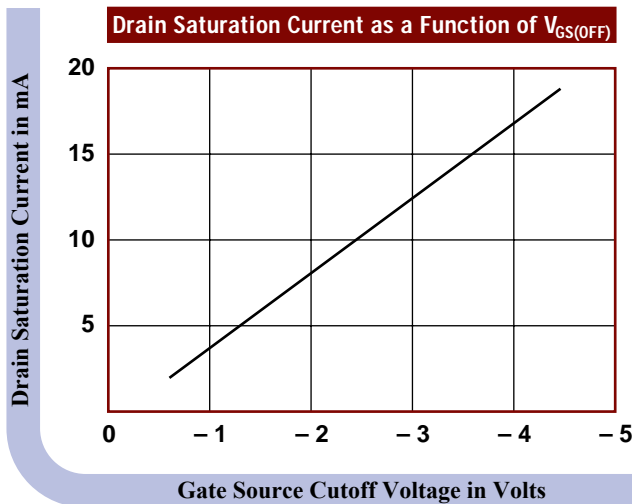
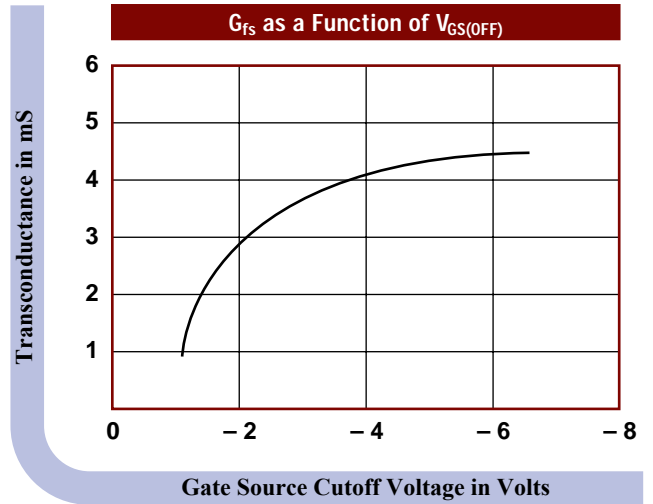
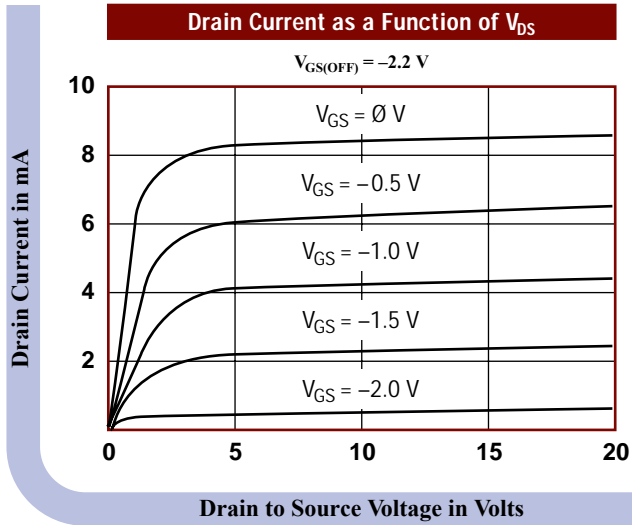


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Silicon Junction Field-Effect Transistor



PJ32 Process

Silicon Junction Field-Effect Transistor

• General Purpose Amplifier

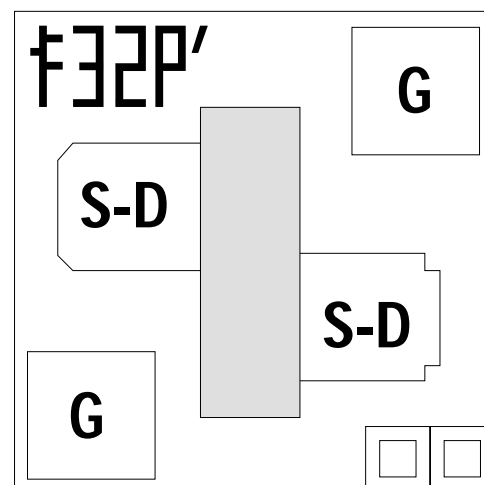
Absolute maximum ratings at TA = 25 °C

Gate Current, I _G	10 mA
Operating Junction Temperature, T _J	+150°C
Storage Temperature, T _S	- 65°C to +175°C

Devices in this Databook based on the PJ32 Process.

Datasheet

2N5020, 2N5021
2N5460, 2N5461
2N5462



Die Size = 0.018" X 0.018"
All Bond Pads = 0.004" Sq.
Substrate is also Gate.

At 25°C free air temperature:

Static Electrical Characteristics

		PJ32 Process						
		Min	Typ	Max	Unit	Test Conditions		
Gate Source Breakdown Voltage	V _{(BR)GSS}	30	50		V	I _G = 1 μA, V _{DS} = 0		
Reverse Gate Leakage Current	I _{GSS}		1	2	nA	V _{GS} = 15V, V _{DS} = 0		
Drain Saturation Current (Pulsed)	I _{DSS}	- 1		- 15	mA	V _{DS} = - 15V, V _{GS} = 0		
Gate Source Cutoff Voltage	V _{GS(OFF)}	0.5		7	V	V _{DS} = - 15V, I _D = 1 nA		

Dynamic Electrical Characteristics

Forward Transconductance	g _{fs}		2.5		mS	V _{DS} = - 15V, V _{GS} = 0	f = 1 kHz
Input Capacitance	C _{iss}		3.2		pF	V _{DS} = 0, V _{GS} = 10	f = 1 MHz
Feedback Capacitance	C _{rss}		1.7		pF	V _{DS} = 0, V _{GS} = 10	f = 1 MHz
Equivalent Noise Voltage	e _N		10		nV/√HZ	V _{DS} = 10V, V _{GS} = 0	f = 1 Hz



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