

## 2N5020, 2N5021

### P-Channel Silicon Junction Field-Effect Transistor

• Analog Switches

**Absolute maximum ratings at  $T_A = 25^\circ\text{C}$**

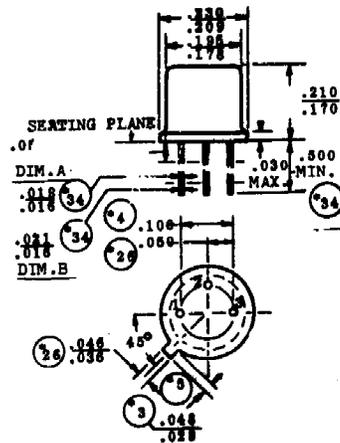
Reverse Gate Source & Reverse Gate Drain Voltage	- 50 V
Continuous Forward Gate Current	50 mA
Continuous Device Power Dissipation	500 mW
Power Derating	4 mW/ $^\circ\text{C}$
Storage Temperature Range	- 65 $^\circ\text{C}$ to + 200 $^\circ\text{C}$

At 25 $^\circ\text{C}$  free air temperature:

Static Electrical Characteristics	Symbol	2N5020		2N5021		Unit	Process PJ32	
		Min	Max	Min	Max		Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GDO}$	25		25		V	$I_G = 1\ \mu\text{A}, V_{DS} = 0\text{V}$	
Gate Reverse Current	$I_{GSS}$		1		1	nA	$V_{GS} = 15\text{V}, V_{DS} = 0\text{V}$	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	0.3	1.5	0.5	2.5	V	$V_{DS} = -15\text{V}, I_D = 1\ \text{nA}$	
Drain Saturation Current (Pulsed)	$I_{DSS}$	- 0.3	- 1.2	- 1	- 3.5	mA	$V_{DS} = -15\text{V}, V_{GS} = 0\text{V}$	

Dynamic Electrical Characteristics

Common Source Forward Transconductance	$g_{fs}$	1	3.5	1.5	6	mS	$V_{DS} = -15\text{V}, V_{GS} = 0\text{V}$	
Common Source Output Conductance	$g_{os}$		20		20	$\mu\text{S}$	$V_{DS} = -15\text{V}, V_{GS} = 0\text{V}$	
Common Source Input Capacitance	$C_{iss}$		25		25	pF	$V_{DS} = -15\text{V}, V_{GS} = 0\text{V}$ f = 1 MHz	
Common Source Reverse Transfer Capacitance	$C_{rss}$		7		7	pF	$V_{DS} = -15\text{V}, V_{GS} = 0\text{V}$ f = 1 MHz	



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