

2N5460, 2N5461, 2N5462

P-Channel Silicon Junction Field-Effect Transistor

- Audio Amplifiers
- General Purpose Amplifiers

Absolute maximum ratings at 25 °C

Reverse Gate Source & Reverse Gate Drain Voltage
 Continuous Forward Gate Current
 Continuous Device Power Dissipation
 Power Derating

40 V
 – 10 mA
 310 mW
 2.8 mW/°C

At 25°C free air temperature:
 Static Electrical Characteristics

		2N5460		2N5461		2N5462		Process PJ32		
		Min	Max	Min	Max	Min	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	40		40		40		V	$I_G = 10 \mu A$, $V_{DS} = 0 V$	
Gate Reverse Current	I_{GSS}		5		5		5	nA	$V_{GS} = 20 V$, $V_{DS} = 0 V$	
			1		1		1	μA	$V_{GS} = 20 V$, $V_{DS} = 0 V$	$T_A = 100^\circ C$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	0.75	6	1	7.5	1.8	9	V	$V_{DS} = -15 V$, $I_D = -1 \mu A$	
Gate Source Voltage	V_{GS}	0.8	4.5					V	$V_{DS} = -15 V$, $I_D = -100 \mu A$	
				0.8	4.5			V	$V_{DS} = -15 V$, $I_D = -200 \mu A$	
						1.5	6	V	$V_{DS} = -15 V$, $I_D = -400 \mu A$	
Drain Saturation Current (Pulsed)	I_{DSS}	– 1	– 5	– 2	– 9	– 4	– 16	mA	$V_{DS} = -15 V$, $V_{GS} = 0 V$	

Dynamic Electrical Characteristics

Drain Source ON Resistance	$r_{ds(on)}$		2		0.8		0.4	k Ω	$V_{GS} = 0 V$, $I_D = 0 A$	$f = 1 kHz$
Common Source Forward Transadmittance	$ Y_{fs} $	1	4	1.5	5	2	6	mS	$V_{DS} = -15 V$, $V_{GS} = 0 V$	$f = 1 kHz$
Common Source Output Admittance	$ Y_{os} $		75		75		75	μS	$V_{DS} = -15 V$, $V_{GS} = 0 V$	$f = 1 kHz$
Common Source Input Capacitance	C_{iss}		7		7		7	pF	$V_{DS} = -15 V$, $V_{GS} = 0 V$	$f = 1 MHz$
Common Source Reverse Transfer Capacitance	C_{rss}		2		2		2	pF	$V_{DS} = -15 V$, $V_{GS} = 0 V$	$f = 1 MHz$
Equivalent Short Circuit Input Noise Voltage	$\bar{e}_N$		2.5		2.5		2.5	dB	$V_{DS} = -15 V$, $V_{GS} = 0 V$	$f = 100 Hz$, $BW = 1 Hz$
Noise Figure	NF		115		115		115	nV/ $\sqrt{Hz}$	$V_{DS} = -15 V$, $V_{GS} = 0 V$, $R_G = 1 M\Omega$	$f = 100 Hz$

TO-226AA Package

Dimensions in Inches (mm)

Pin Configuration

1 Drain, 2 Source, 3 Gate

Surface Mount

SMP5460, SMP5461, SMP5462

