2N6453, 2N6454

N-Channel Silicon Junction Field-Effect Transistor

- Audio Amplifiers
- Low-Noise, High Gain Amplifiers
- Low-Noise Preamplifiers

Absolute maximum ratings at T_A = 25°C

	2N6453	2N6454
Reverse Gate Source Voltage	– 20 V	– 25 V
Reverse Gate Drain Voltage	– 20 V	– 25 V
Continuous Forward Gate Current	10 mA	10 mA
Continuous Device Power Dissipation	360 mW	360 mW
Power Derating	2.88 mW/°C	2.88 mW/°C

At 25°C free air temperature:		2N6453		2N6454		Process NJ132L		
Static Electrical Characteristics		**Min**	**Max**	**Min**	**Max**	**Unit**	**Test Conditions**	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 20		– 25		V	I_G = – 1 µA, V_{DS} = ØV	
Gate Reverse Current	I_{GSS}		– 0.1			nA	V_{GS} = – 10V, V_{DS} = ØV	
					– 0.5	nA	V_{GS} = – 15V, V_{DS} = ØV	
			– 0.2			µA	V_{GS} = – 10V, V_{DS} = ØV	T_A = 125°C
					– 1	µA	V_{GS} = – 15V, V_{DS} = ØV	T_A = 125°C
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 0.75	– 5	– 0.75	– 5	V	V_{DS} = 10V, I_D = 0.5 nA	
Drain Saturation Current (Pulsed)	I_{DSS}	15	50	15	50	mA	V_{DS} = 10V, V_{GS} = ØV	
Dynamic Electrical Characteristics								
Common Source Forward Transmittance	$\lvert Y_{fs} \rvert$					mS	V_{DS} = 10V, I_D = 5 mA	f = 1 kHz
		20	40	20	40	mS	V_{DS} = 10V, I_D = 15 mA	f = 1 kHz
Common Source Output Conductance	$\lvert Y_{os} \rvert$					µS	V_{DS} = 10V, I_D = 5 mA	f = 1 kHz
			100		100	µS	V_{DS} = 10V, I_D = 15 mA	f = 1 kHz
Common Source Input Capacitance	C_{iss}					pF	V_{DS} = 10V, I_D = 5 mA	f = 1 kHz
			25		25	pF	V_{DS} = 10V, I_D = 15 mA	f = 1 kHz
Common Source Reverse Transfer Capacitance	C_{rss}					pF	V_{DS} = 10V, I_D = 5 mA	f = 1 kHz
			5		5	pF	V_{DS} = 10V, I_D = 15 mA	f = 1 kHz
Equivalent Short Circuit Input Noise Voltage	$\bar{e}_N$		5		10	nV/√Hz	V_{DS} = 10V, I_D = 5 mA	f = 10 kHz
			3		8	nV/√Hz	V_{DS} = 10V, I_D = 5 mA	f = 1 kHz
Noise Figure	NF		1.5		2.5	dB	V_{DS} = 10V, I_D = 5 mA R_G = 10 kΩ	f = 10 Hz

TO-72 Package
Dimensions in Inches (mm)

Pin Configuration
1 Source, 2 Drain, 3 Gate, 4 Case

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