2N4338, 2N4339

N-Channel Silicon Junction Field-Effect Transistor

- Audio Amplifiers
- Small Signal Amplifiers
- Voltage-Controlled Resistors
- Current Limiters & Regulators

Absolute maximum ratings at T_A = 25°C

Reverse Gate Source & Reverse Gate Drain Voltage	– 50 V
Continuous Forward Gate Current	50 mA
Continuous Device Power Dissipation	300 mW
Power Derating (to 175°C)	2mW/°C

At 25°C free air temperature:		2N4339		2N4339		Process NJ16		
Static Electrical Characteristics		**Min**	**Max**	**Min**	**Max**	**Unit**	**Test Conditions**	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	– 50		– 50		V	I_G = – 1 µA, V_{DS} = ØV	
Gate Reverse Current	I_{GSS}		– 100		– 100	pA	V_{GS} = – 30V, V_{DS} = ØV	
			– 100		– 100	nA	V_{GS} = – 30V, V_{DS} = ØV	T_A = 150°C
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	– 0.3	– 1	– 0.6	– 1.8	V	V_{DS} = 15V, I_D = 0.1 µA	
Drain Saturation Current (Pulsed)	I_{DSS}	0.2	0.6	0.5	1.5	mA	V_{DS} = 15V, V_{GS} = ØV	
Drain Cutoff Current	$I_{D(OFF)}$		0.05 (– 5)		0.05 (– 5)	nA V	V_{DS} = 15V, V_{GS} = ( )	
Dynamic Electrical Characteristics								
Drain Source ON Resistance	$r_{ds(on)}$		2500		1700	Ω	V_{GS} = ØV, I_D = Ø A	f = 1 kHz
Common Source Forward Transconductance	g_{fs}	600	1800	800	2400	µS	V_{DS} = 15V, V_{GS} = ØV	f = 1 kHz
Common Source Output Conductance	g_{os}		5		15	µS	V_{DS} = 15V, V_{GS} = ØV	f = 1 kHz
Common Source Input Capacitance	C_{iss}		7		7	pF	V_{DS} = 15V, V_{GS} = ØV	f = 1 MHz
Common Source Reverse Transfer Capacitance	C_{rss}		3		3	pF	V_{DS} = 15V, V_{GS} = ØV	f = 1 MHz
Noise Figure	NF		1		1	dB	V_{DS} = 15V, V_{GS} = ØV R_G = 1 MΩ, BW = 200 Hz	f = 1 kHz

TO-18 Package
Dimensions in Inches (mm)

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

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