

## **BSR58**

# N-Channel Low-Frequency Low-Noise Amplifier

 This device is designed for low-power chopper or switching application sourced from process 51



1. Drain 2. Source 3. Gate

## Absolute Maximum Ratings $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{DGO}$	Drain-Gate Voltage	40	V
$V_{GSO}$	Gate-Source Voltage	- 40	V
I <sub>GF</sub>	Forward Gate Current	50	mA
P <sub>tot</sub>	Total Power Dissipation up to T <sub>amb</sub> =40°C	250	mW
T <sub>STG</sub>	Storage Temperature Range	- 55 ~ 150	°C
TJ	Junction Temperature	150	°C

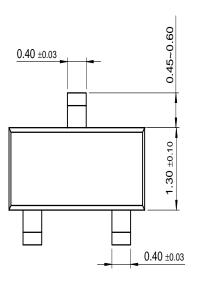
### Electrical Characteristics T<sub>C</sub>=25°C unless otherwise noted

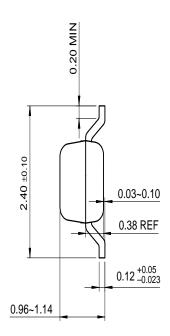
Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV <sub>GSS</sub>	Gate-Source Voltage	$V_{DS} = 0V, I_{C} = 1\mu A$	40			V
I <sub>GSS</sub>	Gate Reverse Current	V <sub>GS</sub> = 20V			1	nA
I <sub>DSS</sub>	Zero-Gate Voltage Drain Current	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V	8		80	mA
V <sub>GS</sub> (off)	Gate-Source Cut-off Voltage	$V_{DS} = 15V, I_{D} = 0.5nA$	0.8		4	V
V <sub>DS</sub> (on)	Drain-Source On Voltage	$V_{GS} = 0V, I_D = 5mA$			0.4	V
r <sub>ds</sub> (on)	Drain-Source On Reverse	$V_{GS} = 0V, I_{D} = 0$			60	Ω
C <sub>rss</sub>	Reverse Transfer Capacitance	V <sub>DS</sub> = 0V, V <sub>GS</sub> = 10V			5	pF
t <sub>d</sub>	Delay Time	$V_{DD} = 10V, V_{GS}(on) = 0V$			10	nS
t <sub>r</sub>	Rise Time	$I_D = 10 \text{mA}, V_{GS}(\text{off}) = 10 \text{V}$			10	nS
t <sub>off</sub>	Turn-off Time				100	nS

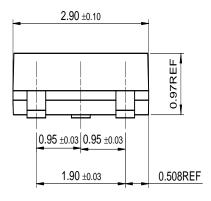
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## **Package Dimensions**

## **SOT-23**







Dimensions in Millimeters

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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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