



# THE DATASHEET OF BSR56



# ON Semiconductor

## Is Now

The logo for onsemi, featuring the word "onsemi" in a dark teal, lowercase, sans-serif font. The letter "i" is stylized with a white dot and a teal vertical bar. A small orange triangle is positioned above the top right of the "i". A trademark symbol (TM) is located to the right of the logo.

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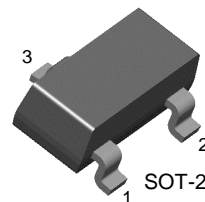
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## BSR56

### N-Channel JFET Low-Frequency Low-Noise Amplifier

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



SOT-23  
Mark: M4  
1. Drain 2. Source 3. Gate

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

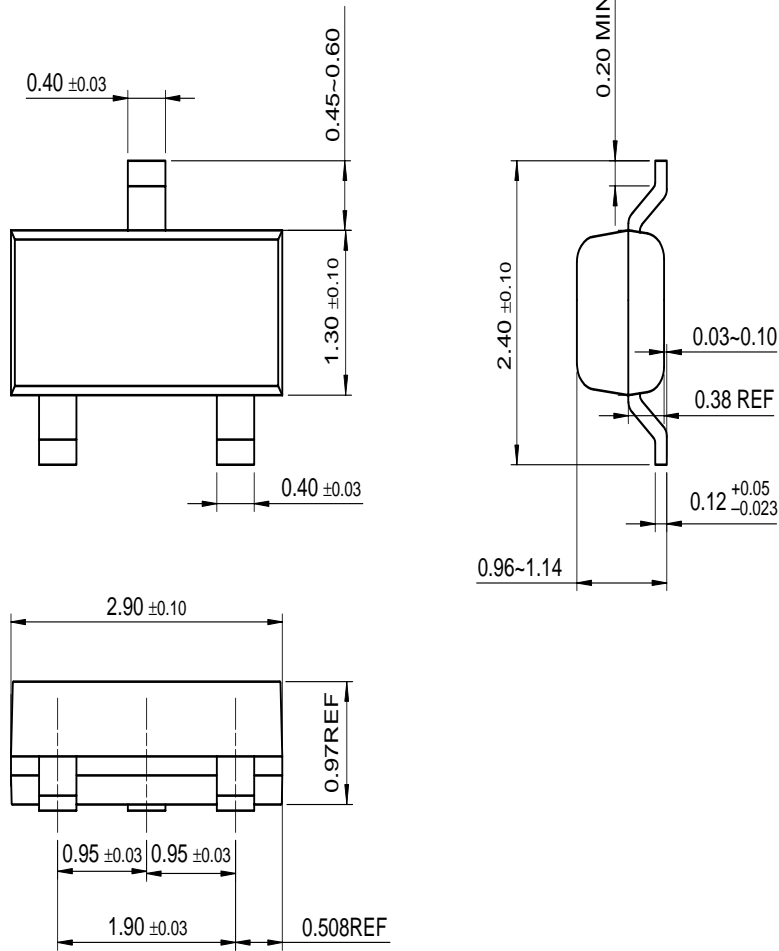
Symbol	Parameter	Value	Units
$V_{DGO}$	Drain-Gate Voltage	40	V
$V_{GSO}$	Gate-Source Voltage	- 40	V
$I_{GF}$	Forward Gate Current	50	mA
$P_{tot}$	Total Power Dissipation up to $T_{amb}=40^\circ\text{C}$	250	mW
$T_{STG}$	Storage Temperature Range	- 55 ~ 150	$^\circ\text{C}$
$T_J$	Junction Temperature	150	$^\circ\text{C}$

### Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{GSS}$	Gate-Source Voltage	$V_{DS} = 0V, I_C = 1\mu\text{A}$	40			V
$I_{GSS}$	Gate Reverse Current	$V_{GS} = 20V$			1	nA
$I_{DSS}$	Zero-Gate Voltage Drain Current	$V_{DS} = 15V, V_{GS} = 0V$	50			mA
$V_{GS(off)}$	Gate-Source Cut-off Voltage	$V_{DS} = 15V, I_D = 0.5\text{nA}$	4		10	V
$V_{DS(on)}$	Drain-Source On Voltage	$V_{GS} = 0V, I_D = 20\text{mA}$			750	mV
$r_{ds(on)}$	Drain-Source On Reverse	$V_{GS} = 0V, I_D = 0$			25	$\Omega$
$C_{rss}$	Reverse Transfer Capacitance	$V_{DS} = 10V, V_{GS} = 0V$			5	pF
$t_d$	Delay Time	$V_{DD} = 10V, V_{GS(on)} = 0V$ $I_D = 20\text{mA}, V_{GS(off)} = 10V$			6	nS
$t_r$	Rise Time				3	nS
$t_{off}$	Turn-off Time				25	nS

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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