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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild guestions@onsemi.com.

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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

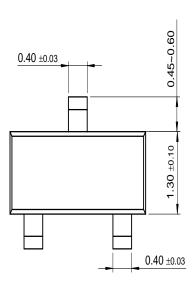
Symbol	Parameter	Value	Units
V_{DGO}	Drain-Gate Voltage	40	V
V_{GSO}	Gate-Source Voltage	- 40	V
I _{GF}	Forward Gate Current	50	mA
P _{tot}	Total Power Dissipation up to T _{amb} =40°C	250	mW
T _{STG}	Storage Temperature Range	- 55 ~ 150	°C
TJ	Junction Temperature	150	°C

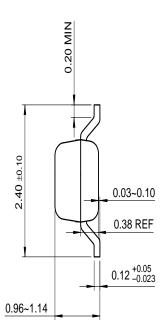
Electrical Characteristics $T_C=25$ °C unless otherwise noted

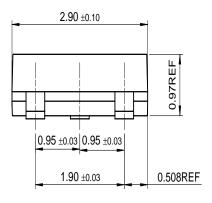
Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _{GSS}	Gate-Source Voltage	$V_{DS} = 0V, I_{C} = 1\mu A$	40			V
I _{GSS}	Gate Reverse Current	V _{GS} = 20V			1	nA
I _{DSS}	Zero-Gate Voltage Drain Current	$V_{DS} = 15V, V_{GS} = 0V$	8		80	mA
V _{GS} (off)	Gate-Source Cut-off Voltage	$V_{DS} =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

Package Dimensions

SOT-23







Dimensions in Millimeters

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