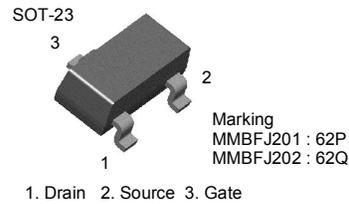
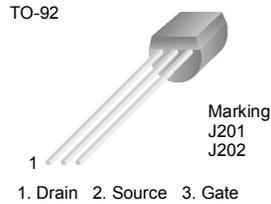


J201 - J202 / MMBFJ201 - MMBFJ203 N-Channel General Purpose Amplifier

- This device is designed primarily for low level audio and general purpose applications with high impedance signal sources.
- Sourced from Process 52.



Absolute Maximum Ratings * T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{DG}	Drain-Gate Voltage	40	V
V _{GS}	Gate-Source Voltage	-40	V
I _{GF}	Forward Gate Current	50	mA
T _J , T _{STG}	Operating and Storage Junction Temperature Range	-55 ~ 150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150°C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics* T_a=25°C unless otherwise noted

Symbol	Parameter	Value		Units
		J201 - J202	MMBFJ201 - MMBFJ203	
P _D	Total Device Dissipation	625	350	W
	Derate above 25°C	5.0	2.8	mW/°C
R _{θJC}	Thermal Resistance, Junction to Case	125		°C/W
R _{θJA}	Thermal Resistance, Junction to Ambient	357	556	°C/W

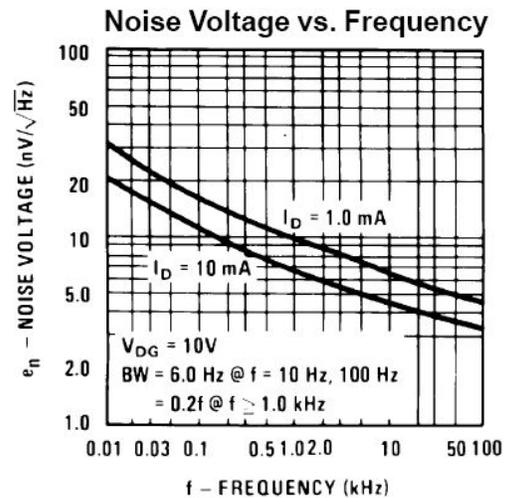
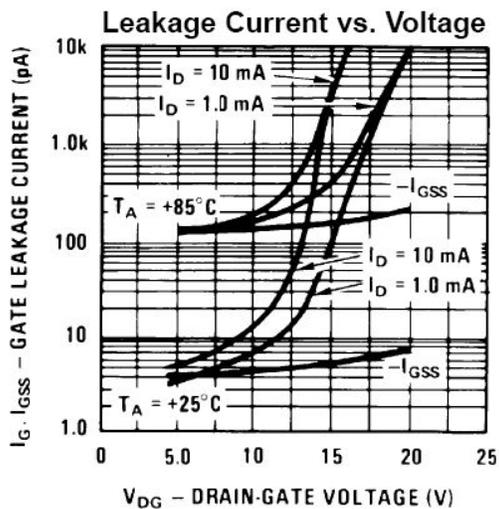
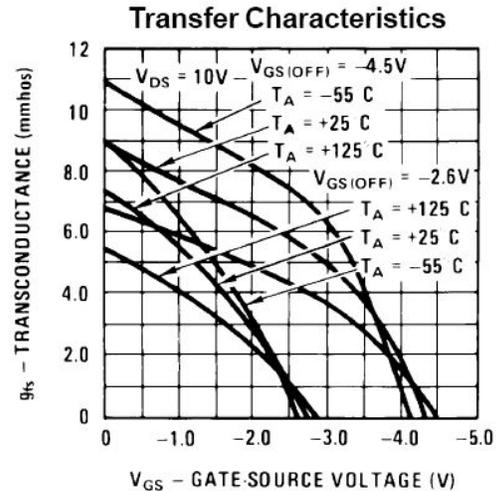
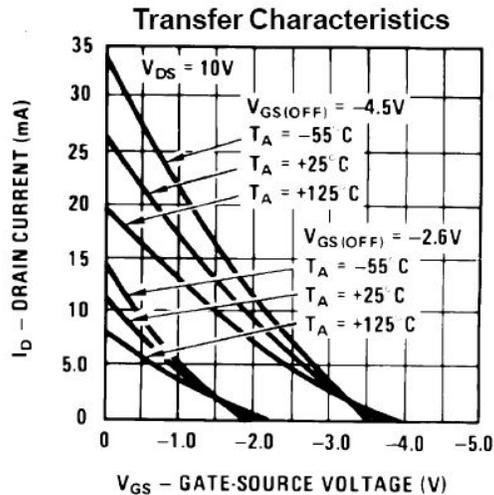
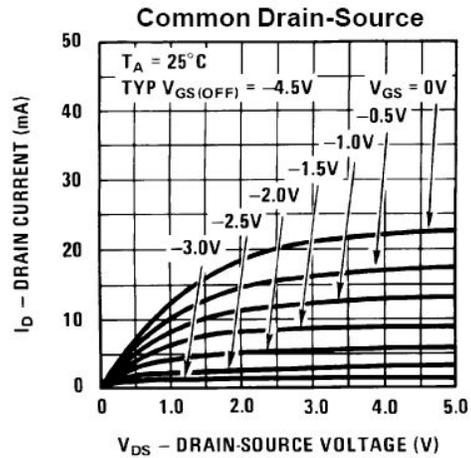
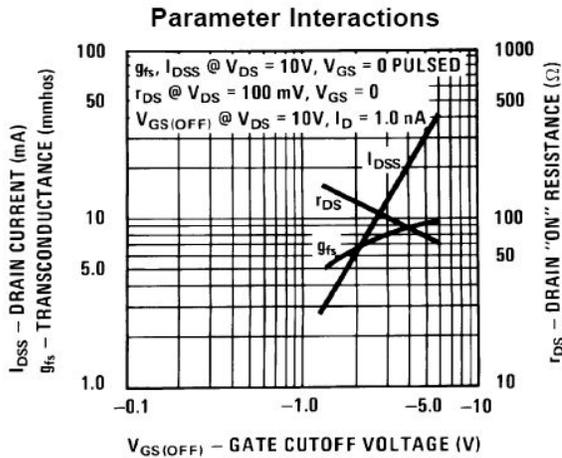
* Device mounted on FR-4 PCB 1.6" x 1.6" x 0.06"

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

Symbol	Parameter	Conditions	Min.	Max	Units	
Off Characteristics						
$V_{(BR)GSS}$	Gate-Source Breakdwon Voltage	$I_G = -1\mu\text{A}, V_{DS} = 0$	-40		V	
I_{GSS}	Gate Reverse Current	$V_{GS} = -20\text{V}, V_{DS} = 0$		-100	pA	
$V_{GS(off)}$	Gate-Source Cutoff Voltage	$V_{DS} = 20\text{V}, I_D = 10\text{nA}$	201 202 203	-0.3 -0.8 -2	-1.5 -4 -10	V
On Characteristics						
I_{DSS}	Zero-Gate Voltage Drain Current *	$V_{DS} = 20\text{V}, I_{GS} = 0$	201 202 203	0.2 0.9 4	1.0 4.5 20	mA
Small Signal Characteristics						
Y_{FS}	Forward Transfer Admittance	$V_{DS} = 20\text{V}, f = 1.0\text{kHz}$	201 202 203	500 1000 1500		μmhos

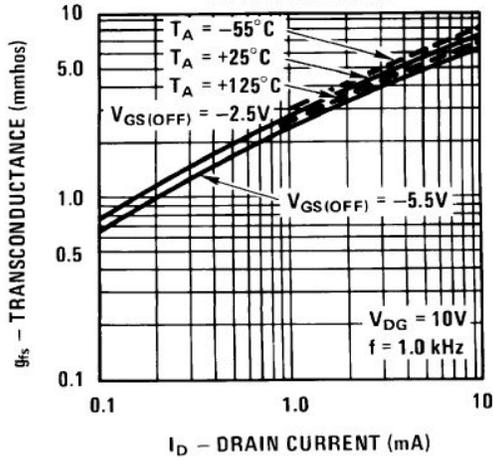
* Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 2.0\%$

Typical Characteristics

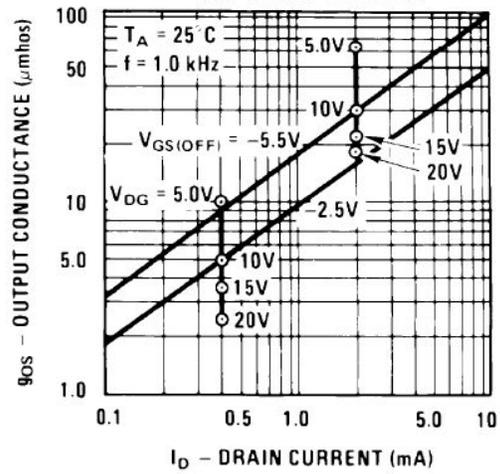


Typical Characteristics (Continued)

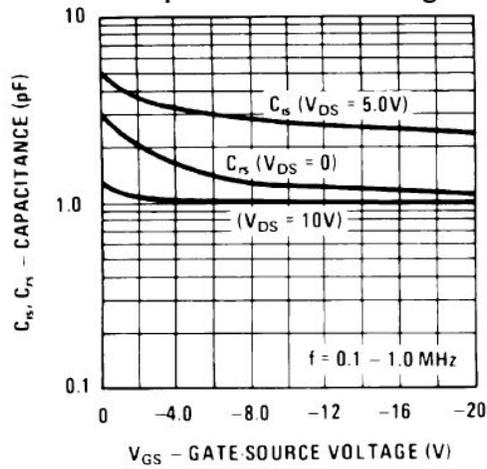
Transconductance vs. Drain Current



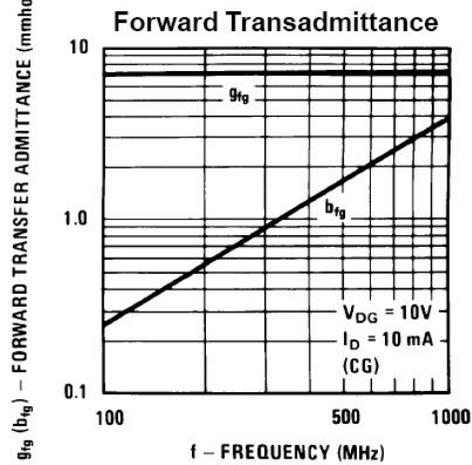
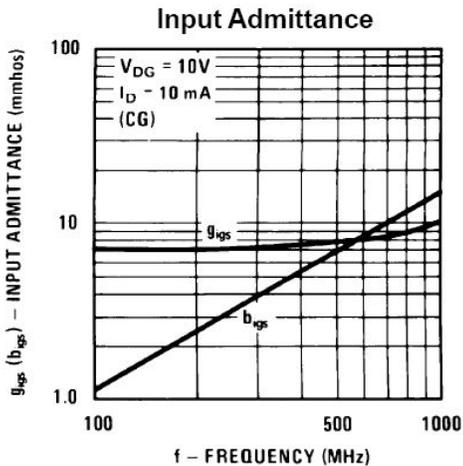
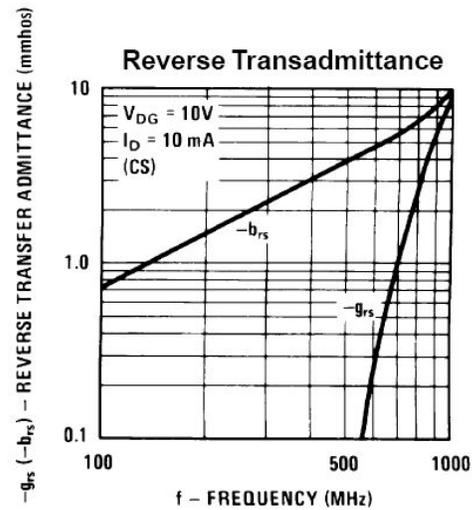
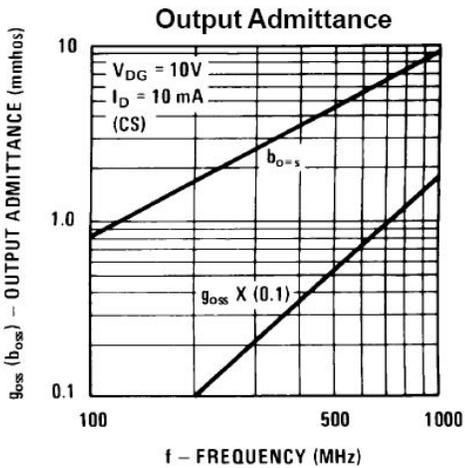
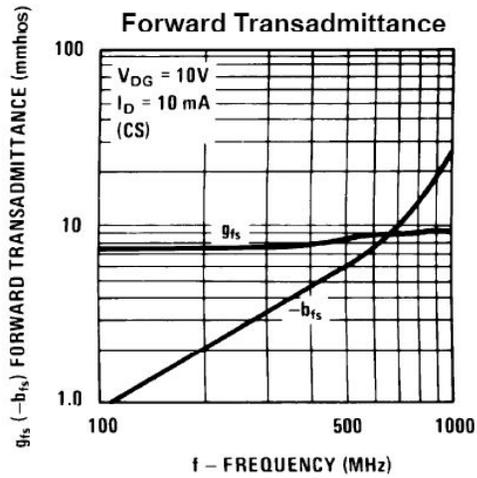
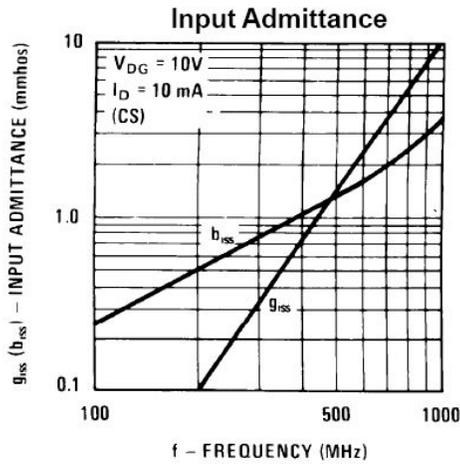
Output Conductance vs. Drain Current



Capacitance vs. Voltage

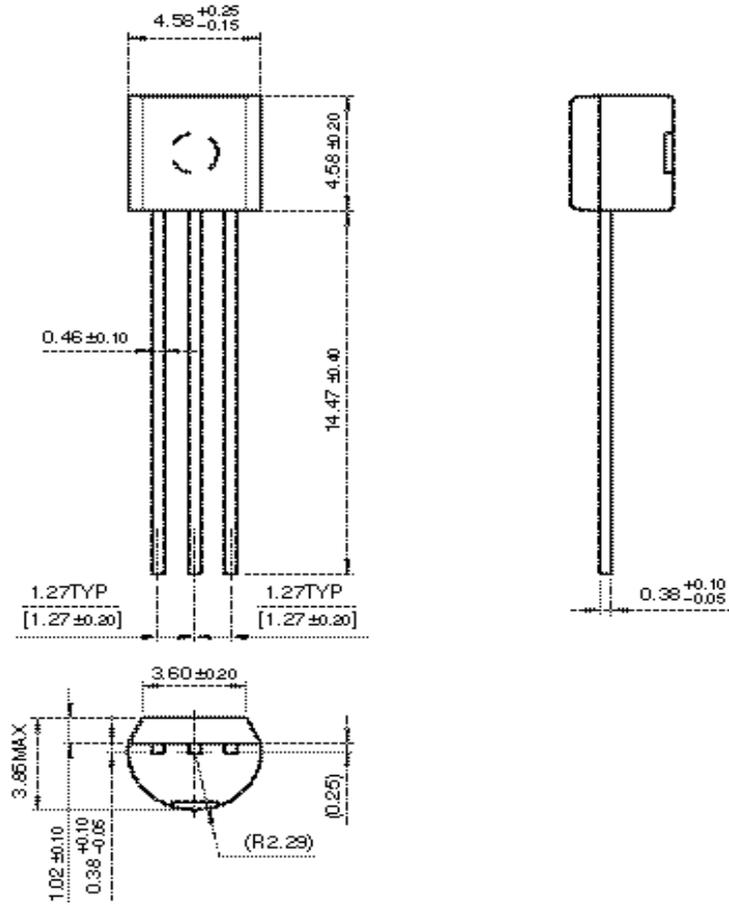


Typical Characteristics (Continued)



Mechanical Dimensions

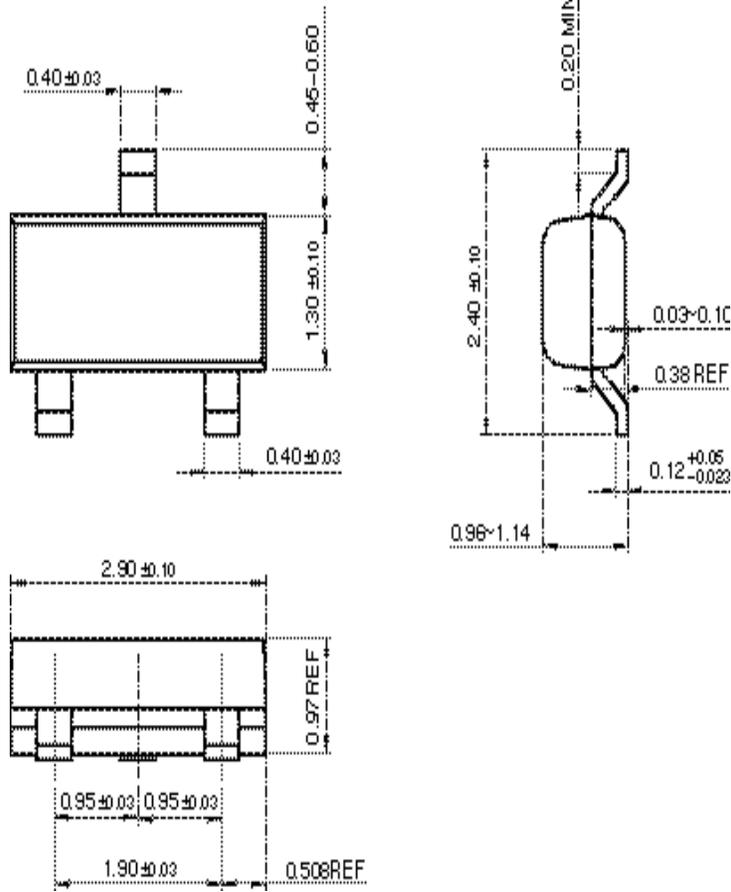
TO-92



J201 - J202 / MMBFJ201 - MMBFJ203 — N-Channel General Purpose Amplifier

Mechanical Dimensions

SOT-23



Dimensions in Millimeters

J201 - J202 / MMBFJ201 - MMBFJ203 — N-Channel General Purpose Amplifier



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