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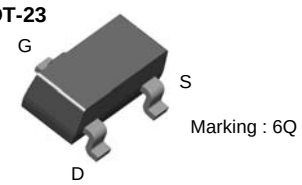
FAIRCHILD SEMICONDUCTOR®

July 2011

MMBFJ305
N-Channel RF Amplifier

Features

- This device is designed primarily for electronic switching applications such as low On Resistance analog switching.
- Sourced from process 50.



Note : Drain & Source are interchangeable.

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

Symbol	Parameter	Value	Units
V_{DG}	Drain-Gate Voltage	30	V
V_{GS}	Gate-Source Voltage	-30	V
I_{GF}	Forward Gate Current	10	mA
$T_{J,}$ T_{STG}	Operating and Storage Junction Temperature Range	-55 to +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 degrees 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
P_D	Total Device Dissipation Derate above 25°C	225 1.8	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	556	°C/W

* Device mounted on FR-4 PCB 1.6” x 1.6” x 0.06”.

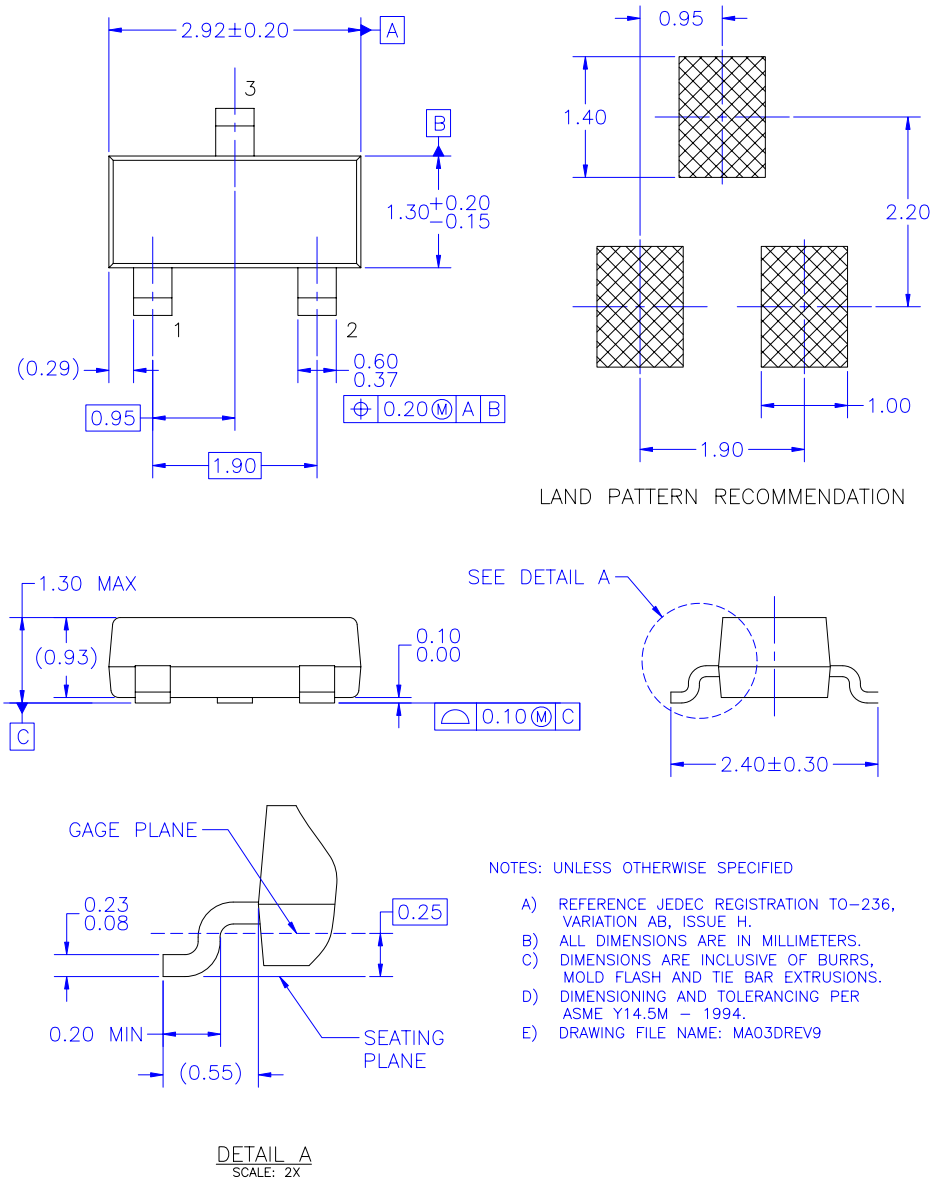
Electrical Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
Off Characteristics					
$V_{(BR)GSS}$	Gate-Source Breakdown Voltage	I_G = -1.0μA, V_{DS} = 0	-30		V
I_{GSS}	Gate Reverse Current	V_{GS} = -20V, V_{DS} = 0		-100	pA
V_{GS}(off)	Gate-Source Cutoff Voltage	V_{DS} = 15V, I_D = 1.0nA	-0.5	-3.0	V
On Characteristics					
I_{DSS}	Zero-Gate Voltage Drain Current*	V_{DS} = 15V, V_{GS} = 0	1.0	8.0	mA
Small Signal Characteristics					
gfs	Forward Transfer Conductance	V_{DS} = 15V, V_{GS} = 0, f = 1.0kHz	3000		μmhos
g_{OSS}	Output Conductance	V_{DS} = 15V, V_{GS} = 0, f = 1.0kHz		50	μmhos

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

Physical Dimensions

SOT-23



Dimensions in Millimeters

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Rev. I56

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