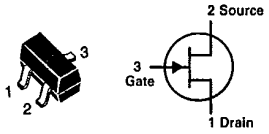
MMBFJ310

CASE 318-02/03, STYLE 10
SOT-23 (TO-236AA/AB)



JFET
VHF/UHF AMPLIFIER
TRANSISTOR

N-CHANNEL

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	25	Vdc
Gate-Source Voltage	V_{GS}	25	Vdc
Gate Current	I_G	10	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board,* T_A = 25°C Derate above 25°C	P_D	225 1.8	mW mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	°C/mW
Total Device Dissipation Alumina Substrate,** T_A = 25°C Derate above 25°C	P_D	300 2.4	mW mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	417	°C/mW
Junction and Storage Temperature	T_J, T_{stg}	150	°C

*FR-5 = 1.0 x 0.75 x 0.62 in.
**Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

DEVICE MARKING

MMBFJ310 = 6T

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Gate-Source Breakdown Voltage (I_G = −1.0 μAdc, V_{DS} = 0)	$V_{(BR)GSS}$	−25	—	—	Vdc
Gate Reverse Current (V_{GS} = −15 V) (V_{GS} = −15 V, T_A = 125°C)	I_{GSS}	— —	— —	−1.0 −1.0	nAdc μAdc
Gate Source Cutoff Voltage (V_{DS} = 10 Vdc, I_D = 1.0 nAdc)	$V_{GS(off)}$	−2.0	—	−6.5	Vdc
ON CHARACTERISTICS					
Zero-Gate-Voltage Drain (V_{DS} = 10 Vdc, V_{GS} = 0)	I_{DSS}	24	—	60	mAdc
Gate-Source Forward Voltage (I_G = 1.0 mAdc, V_{DS} = 0)	$V_{GS(f)}$	—	—	1.0	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Forward Transfer Admittance (V_{DS} = 10 Vdc, I_D = 10 mAdc, f = 1.0 kHz)	$\|Y_{fs}\|$	8.0	—	18	mmhos
Output Admittance (V_{DS} = 10 Vdc, I_D = 10 mAdc, f = 1.0 kHz)	$\|Y_{os}\|$	—	—	200	μmhos
Input Capacitance (V_{GS} = −10 Vdc, V_{DS} = 0 Vdc, f = 1.0 MHz)	C_{iss}	—	—	5.0	pF
Reverse Transfer Capacitance (V_{GS} = −10 Vdc, V_{DS} = 0 Vdc, f = 1.0 MHz)	C_{rss}	—	—	2.5	pF
Equivalent Short-Circuit Input Noise Voltage (V_{DS} = 10 Vdc, I_D = 10 mAdc, f = 100 Hz)	$\bar{e}_n$	—	10	—	nV/√Hz