MMBFJ177LT1G, SMMBFJ177LT1G

JFET Chopper P-Channel – Depletion

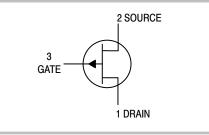
Features

- S Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and **PPAP** Capable
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant



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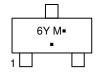
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SOT-23 (TO-236) CASE 318-08 STYLE 10

MARKING DIAGRAM



6Y = Specific Device Code

= Date Code* Μ

= Pb-Free Package -

(Note: Microdot may be in either location) *Date Code orientation and/or overbar may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping [†]
MMBFJ177LT1G	SOT–23 (Pb–Free)	3000 / Tape & Reel
SMMBFJ177LT1G	SOT-23 (Pb-Free)	3000 / Tape & Reel

+For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Drain-Gate Voltage	V _{DG}	-25	Vdc
Gate-Source Voltage	V _{GS}	25	Vdc

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Total Device Dissipation FR-5 Board (Note 1)	PD	225	mW
$T_A = 25^{\circ}C$ Derate above 25°C		1.8	m₩/°C
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	556	°C/W
Junction and Storage Temperature	T _J , T _{stg}	-55 to +150	°C

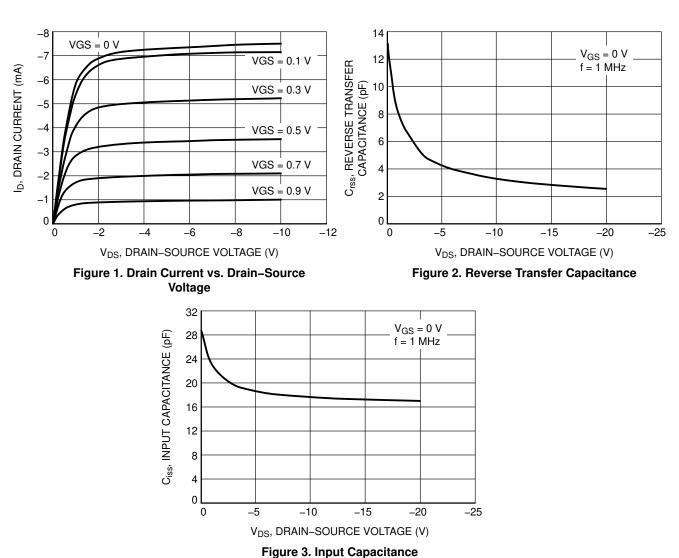
1. FR-5 = $1.0 \times 0.75 \times 0.062$ in.

MMBFJ177LT1G, SMMBFJ177LT1G

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

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS		·			
Gate–Source Breakdown Voltage ($V_{DS} = 0$, $I_D = 1.0 \ \mu Adc$)		V _{(BR)GSS}	30	-	Vdc
Gate Reverse Current (V_{DS} = 0 Vdc, V_{GS} = 20 Vdc)		I _{GSS}	-	1.0	nAdc
Gate Source Cutoff Voltage ($V_{DS} = -15$ Vdc, $I_D = -10$ nAdc)		V _{GS(off)}	0.8	2.5	Vdc
ON CHARACTERISTICS					
Zero–Gate–Voltage Drain Current (V_{GS} = 0, V_{DS} = -15 Vdc) (Note 2)		I _{DSS}	-1.5	-20	mAdc
Drain Cutoff Current (V _{DS} = -15 Vdc, V _{GS} = 10 Vdc)		I _{D(off)}	-	-1.0	nAdc
Drain Source On Resistance ($I_D = -500 \ \mu Adc$)		r _{DS(on)}	-	300	Ω
Input Capacitance	$V_{DS} = 0, V_{GS} = 10 V dc$	C _{iss}	-	11	pF
Reverse Transfer Capacitance	f = 1.0 MHz	C _{rss}	-	5.5	1

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions. 2. Pulse Test: Pulse Width < 300 μ s, Duty Cycle \leq 2%.



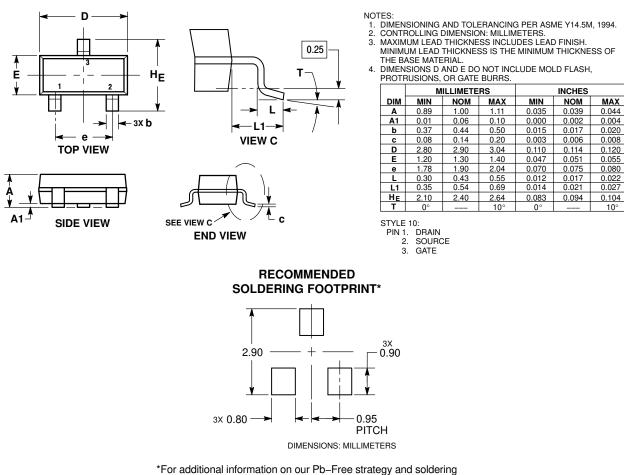
TYPICAL CHARACTERISTICS

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PACKAGE DIMENSIONS

SOT-23 (TO-236) CASE 318-08 ISSUE AR



*For additional information on our Pb–Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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