



# MMBFJ176

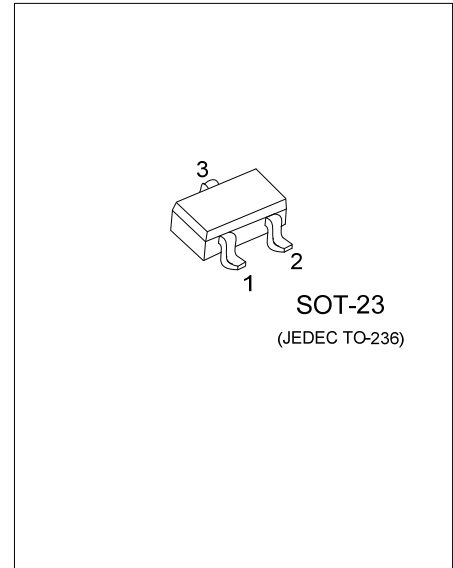
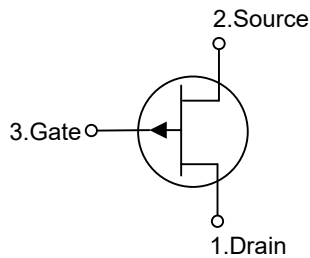
JFET

## P-CHANNEL SWITCH

### DESCRIPTION

The UTC **MMBFJ176** is adesigned for low level analog switching sample and hold circuits and chopper stabilized amplifiers.

### SYMBOL



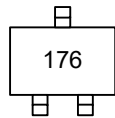
### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MMBFJ176G-AE3-R	MMBFJ176G-AE3-R	SOT-23	D	S	G	Tape Reel

Note: Pin Assignment: D: Drain S: Source G: Gate

MMBFJ176G-AE3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AE3: SOT-23
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Drain-Gate Voltage	$V_{DG}$	-30	V
Gate-Source Voltage	$V_{GS}$	30	V
Forward Gate Current	$I_{GF}$	50	mA
Power Dissipation	$P_D$	225	mW
Junction Temperature	$T_J$	-55 ~ +150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATING	UNIT
Junction to Ambient	$\theta_{JA}$	556	$^\circ\text{C/W}$

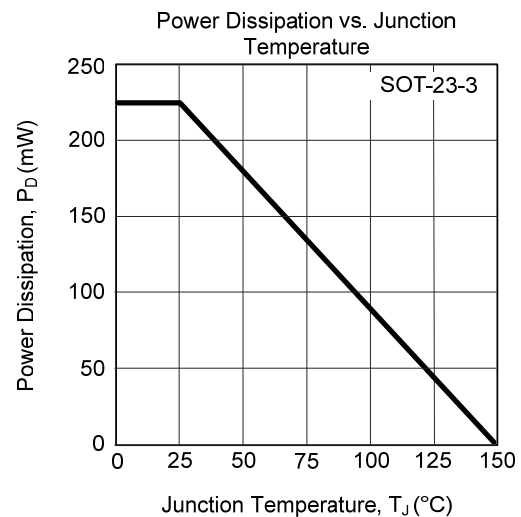
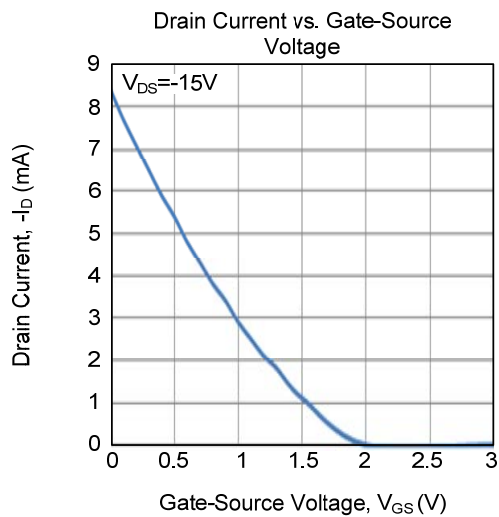
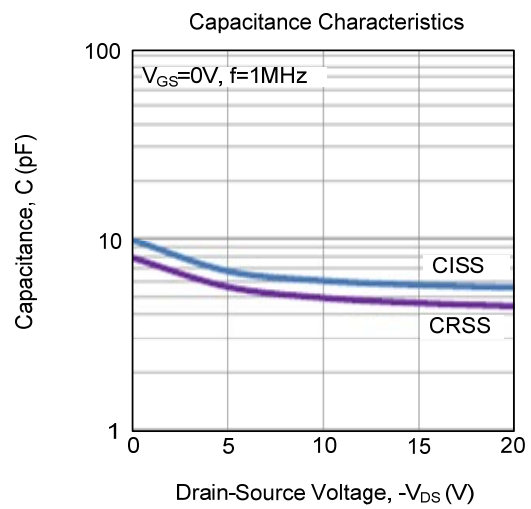
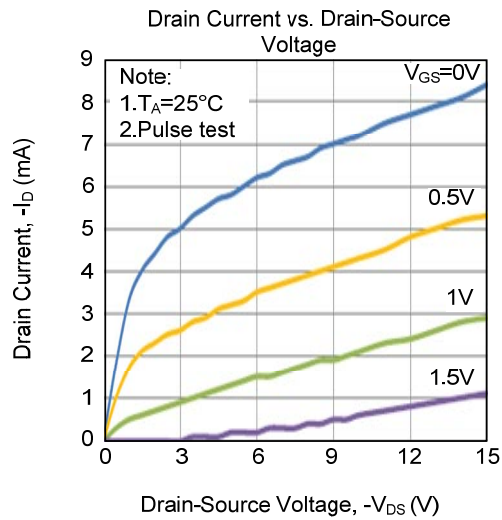
Note: Device mounted on FR-4 PCB 36mm × 18mm × 1.5mm, mounting pad for the collector lead minimum 6cm<sup>2</sup>.

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>OFF CHARACTERISTICS</b>						
Gate-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G=1.0\mu\text{A}$ , $V_{DS}=0$	30			V
Gate Reverse Current (Note)	$I_{GSS}$	$V_{GS}=20\text{V}$ , $V_{DS}=0$			1.0	nA
Gate-Source Cut-Off Voltage	$V_{GS(OFF)}$	$V_{DS}=-15\text{V}$ , $I_D=-10\text{nA}$	1.0		4.0	V
<b>ON CHARACTERISTICS</b>						
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-15\text{V}$ , $V_{GS}=0$	-2.0		-25	mA
Drain-Source On Resistance	$R_{DS(ON)}$	$V_{DS}\leq 0.1\text{V}$ , $V_{GS}=0$			250	$\Omega$
<b>SMALL SIGNAL CHARACTERISTICS</b>						
Drain-Gate On Capacitance	$C_{ISS}$	$V_{DS}=-10\text{V}$ , $V_{GS}=0\text{V}$ , $F=1\text{MHz}$		6		pF
Source-Gate On Capacitance	$C_{RSS}$			4.8		pF

Note: Pulse test: pulse width  $\leq 300\ \mu\text{s}$ , duty cycle  $\leq 2\%$ .

## TYPICAL CHARACTERISTICS



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