



MMBD7000

Preliminary

DIODE

DUAL SURFACE MOUNT SWITCHING DIODE

DESCRIPTION

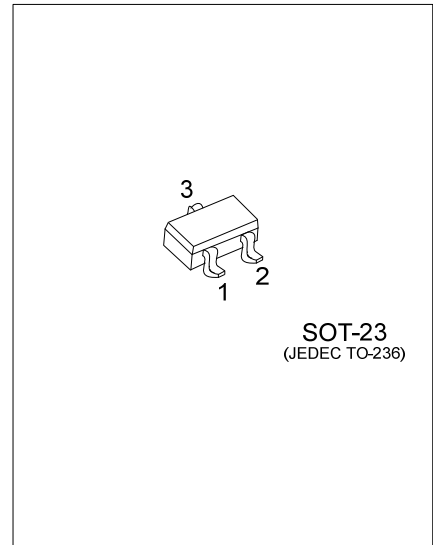
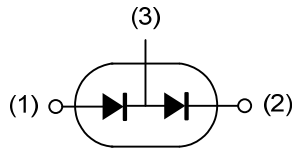
The UTC **MMBD7000** is dual surface mount switching diode, designed for For general purpose switching application.

The devices is manufactured by the silicon epitaxial planar process and packed in plastic surface mount package.

FEATURES

- * High conductance
- * Ultra-high speed
- * Low forward voltage
- * Fast reverse recovery time

SYMBOL



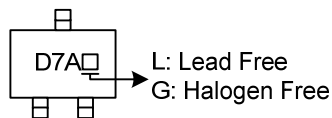
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen-Free		1	2	3	
MMBD7000L-AE3-R	MMBD7000G-AE3-R	SOT-23	A1	K2	K1A2	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MMBD7000G-AE3-R</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
------------------------	---

MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT	
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V	
Maximum Repetitive Reverse Voltage	V_{RRM}	75	V	
Average Rectified Forward Current	$I_{F(AV)}$	300	mA	
Non-repetitive Peak Forward Surge Current	I_{FSM}	$t=1.0\mu\text{s}$	2	A
		$t=1.0\text{s}$	1	A
Power Dissipation (Note 3)	P_D	350	mW	
Junction Temperature	T_J	+150	$^\circ\text{C}$	
Storage Temperature	T_{STG}	-65 ~ +150	$^\circ\text{C}$	

Note: 1. These ratings are based on a maximum junction temperature of 200°C .

2. 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.

3. Device mounted on FR-4 PCB minimum land pad

■ THERMAL DATA

CHARACTERISTIC	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	357	$^\circ\text{C/W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Breakdown Voltage	V_R	$I_R=100\mu\text{A}$	75			V
Forward Voltage	V_F	$I_F=1\text{mA}$	0.55		0.70	V
		$I_F=10\text{mA}$	0.67		0.82	V
		$I_F=50\text{mA}$	0.75		1.10	V
		$I_F=150\text{mA}$			1.25	V
Reverse Current	I_R	$V_R=20\text{V}$			25	nA
		$V_R=50\text{V}$			1.0	μA
		$V_R=50\text{V}, T_J=125^\circ\text{C}$			100	μA
		$V_R=100\text{V}$			3.0	μA
Total Capacitance	C_T	$V_R=0\text{V}, f=1.0\text{MHz}$			2.0	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10\text{mA}, I_{RR}=0.1 \times I_R, R_L=100\Omega$			4.0	ns

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.