

MMBD3004A/C/S

HIGH VOLTAGE SURFACE MOUNT SWITCHING DIODE

VOLTAGE 350 Volt **POWER** 410 mWatt

SOT-23

Unit : inch(mm)

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- High Conductance
- High Reverse Breakdown Voltage Rating
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

Case: SOT-23, Plastic

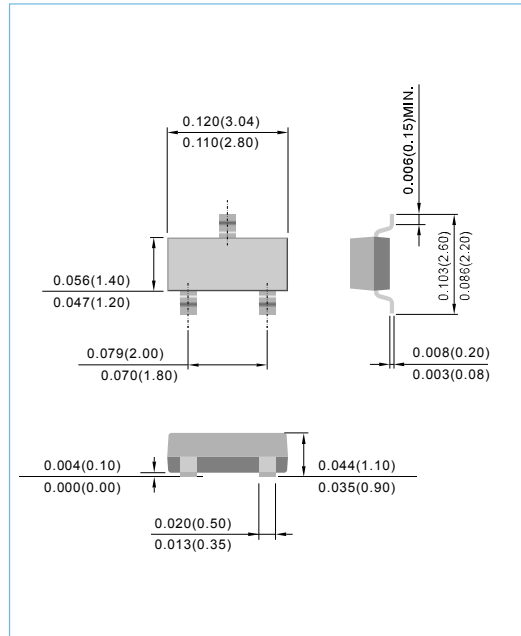
Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.0003 ounces, 0.0084 grams

Marking : MMBD3004A : P11

MMBD3004C : P12

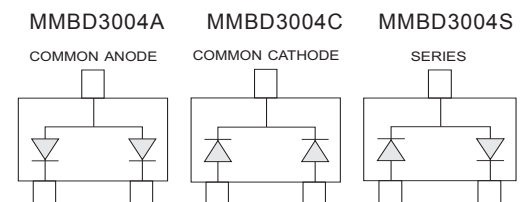
MMBD3004S : P13



MAXIMUM RATINGS(T_A=25°C,unless otherwise specified)

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V _{RRM}	350	V
Working Peak Reverse Voltage DC Blocking Voltage	V _{RFWM} V _R	240	V
RMS Reverse Voltage	V _{R(RMS)}	212	V
Forward Continuous Current (Note 1)	I _F	225	mA
Peak Repetitive Forward Current (Note 1)	I _{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current @ t=0.001ms @ t=1000ms	I _{FSM}	4.0 1.0	A
Power Dissipation (Note 1)	P _d	410	mW
Typical Thermal Resistance Junction to Ambient Air (Note 1)	R _{ΘJA}	310	°C/W
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to + 150	°C

Notes : 1. Part mounted on FR-4 board with recommended pad layout.



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

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Reverse Breakdown Voltage (Note 2)	$V_{(BR)}$	350	-	-	V	$I_R=150\mu\text{A}$
Forward Voltage (Note 2)	V_F	-	0.78 0.93 1.03	0.87 1.0 1.25	V	$I_F=20\text{mA}$ $I_F=100\text{mA}$ $I_F=200\text{mA}$
Reverse Current (Note 2)	I_R	-	30	100	nA	$V_R=350\text{V}$
Total Capacitance	C_T	-	1.0	5.0	pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	-	-	50	ns	$I_F=I_R=30\text{mA}$ $I_{rr}=3.0\text{mA}, R_L=100\Omega$

Notes : 2. Short duration test pulse used to minimize self-heating effect

ELECTRICAL CHARACTERISTICS CURVES

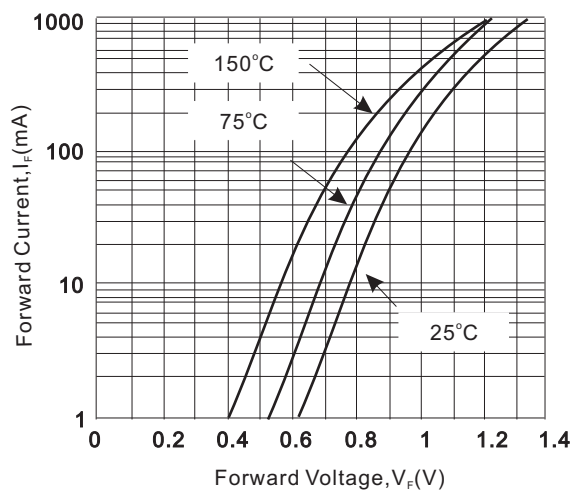


FIG.1 Typical Forward

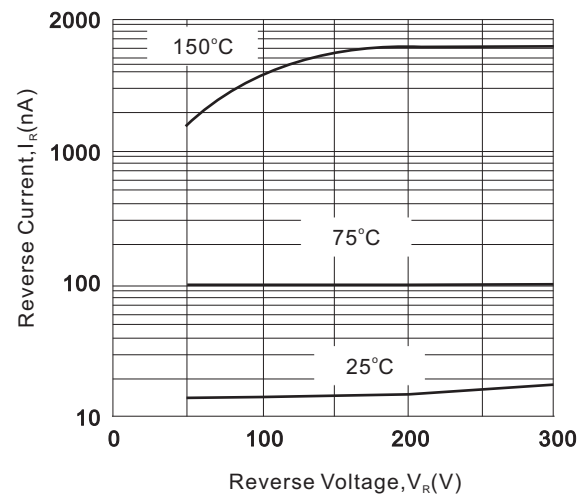


FIG.2 Typical Reverse

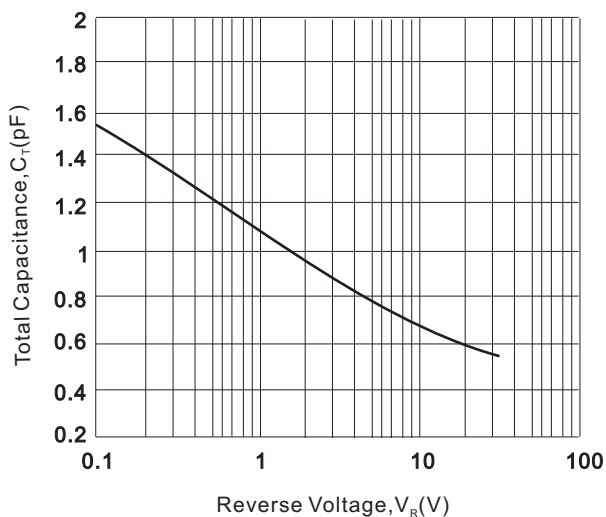


FIG.3 Typical Capacitance

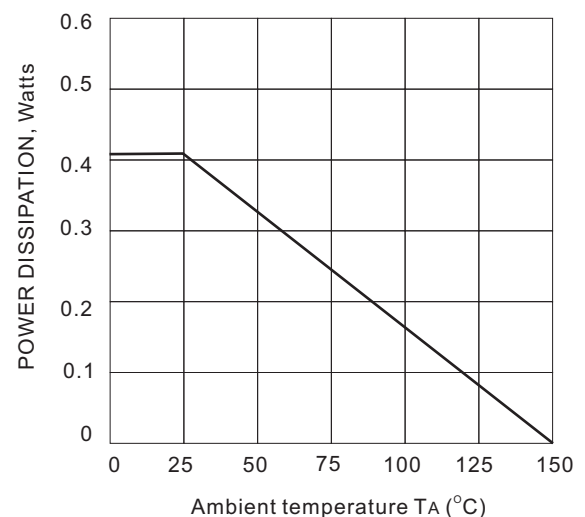
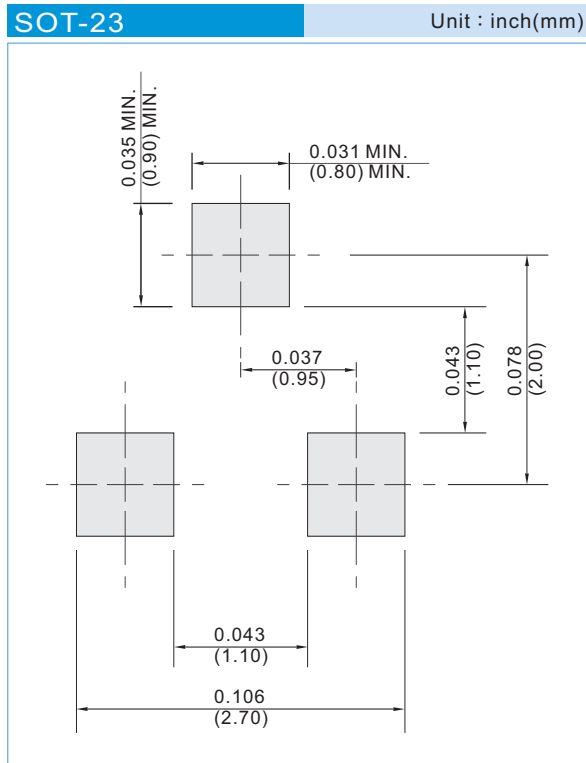


FIG.4 Forward current derating curve

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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

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Part No_packing code_Version

MMBD3004A_R1_00001

MMBD3004A_R2_00001

For example :

RB500V-40_R2_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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