

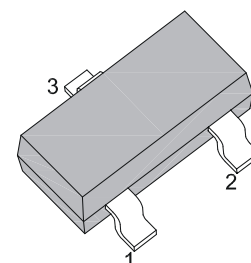
Three Terminals SMD Switching Diodes

Features

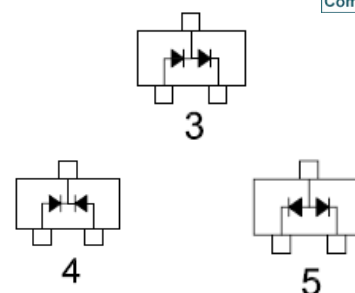
- Fast switching speed
- High conductance
- High reverse breakdown voltage rating
- Surface mount package ideally suited for automatic insertion
- RoHS compliant

Mechanical Data

Case:	SOT-23, Plastic Case
Terminals:	Solderable per MIL-STD-750, Method 2026
Weight:	Approx. 0.008 gram



SOT-23



Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	MMBD3004A	MMBD3004C	MMBD3004S	Unit	Conditions
	Pinout Figure	5	4	3		
	Marking Code	P11	P12	P13		
VRWM	Working Peak Reverse Voltage DC Blocking Voltage	300			V	
VRRM	Peak Reverse Voltage	350			V	
VR(RMS)	RMS Reverse Voltage	212			V	
IF	Forward Continuous Current	225			mA	Note 1
IFRM	Peak Repetitive Forward Current	625			mA	Note 1
IFSM	Peak Forward Surge Current	4			A	t=1.0μs
		1				t=1.0s
Pd	Power Dissipation	250			mW	Note 1
RthJA	Thermal Resistance from Junction to Ambient Air	500			° C/W	Note 1

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MMBD3004A/C/S

Symbol	Description	MMBD3004A	MMBD3004C	MMBD3004S	Unit	Conditions
T_J , T_{STG}	Operating Junction and Storage Temperature Range	-65 to +150			° C	

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

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
$V_{(BR)R}$	Reverse Breakdown Voltage (Note 2)	350	-	-	V	$I_R=150\mu A$
V_F	Forward Voltage (Note 2)	-	0.78	0.87	V	$I_F=20mA$
			0.93	1.0		$I_F=100mA$
			1.03	1.25		$I_F=200mA$
I_R	Reverse Current (Note 2)	-	30	100	nA	$V_R=240V$
			35	100	μA	$V_R=240V$, $T_J=150^{\circ}C$
C_T	Total Capacitance	-	1.0	5.0	pF	$V_R=0V$, $f=1MHz$
T_{rr}	Reverse Recovery Time	-	-	50	nS	$I_F=30mA$, $I_R=30mA$, $I_{rr}=3.0mA$, $R_L=100\Omega$

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

Typical Characteristics Curves

Fig.1- Typical Forward Characteristics

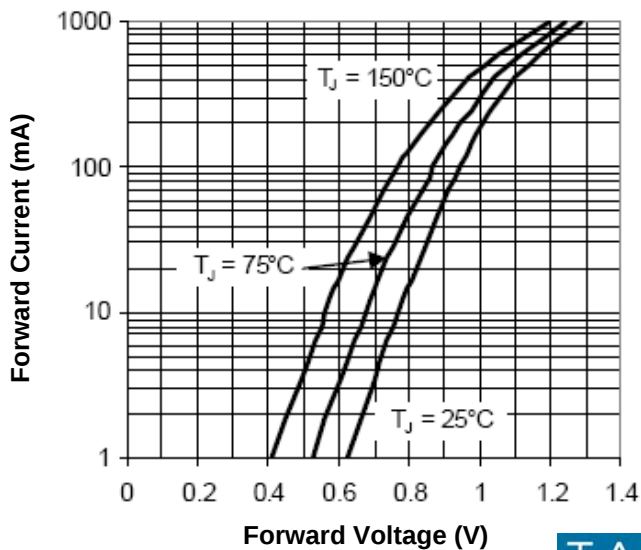
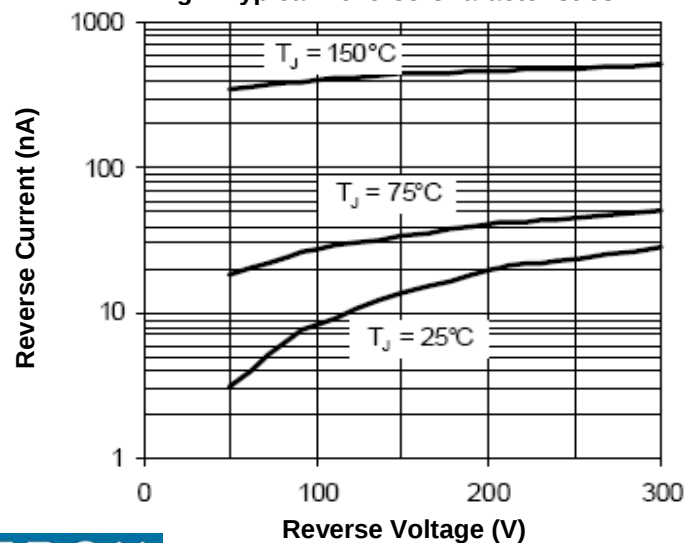


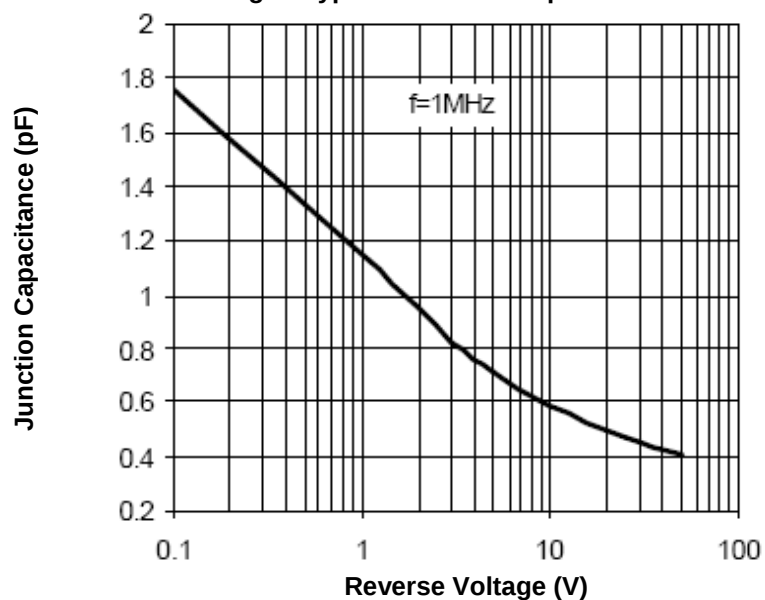
Fig.2-Typical Reverse Characteristics



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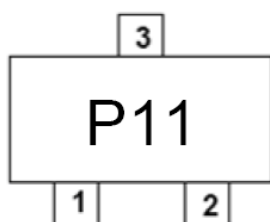
MMBD3004A/C/S

Fig.3- Typical Junction Capacitance

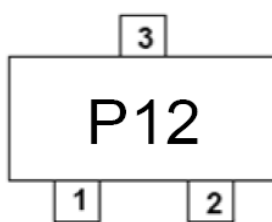


Marking Information:

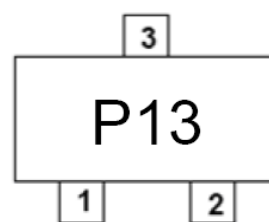
MMBD3004A



MMBD3004C



MMBD3004S

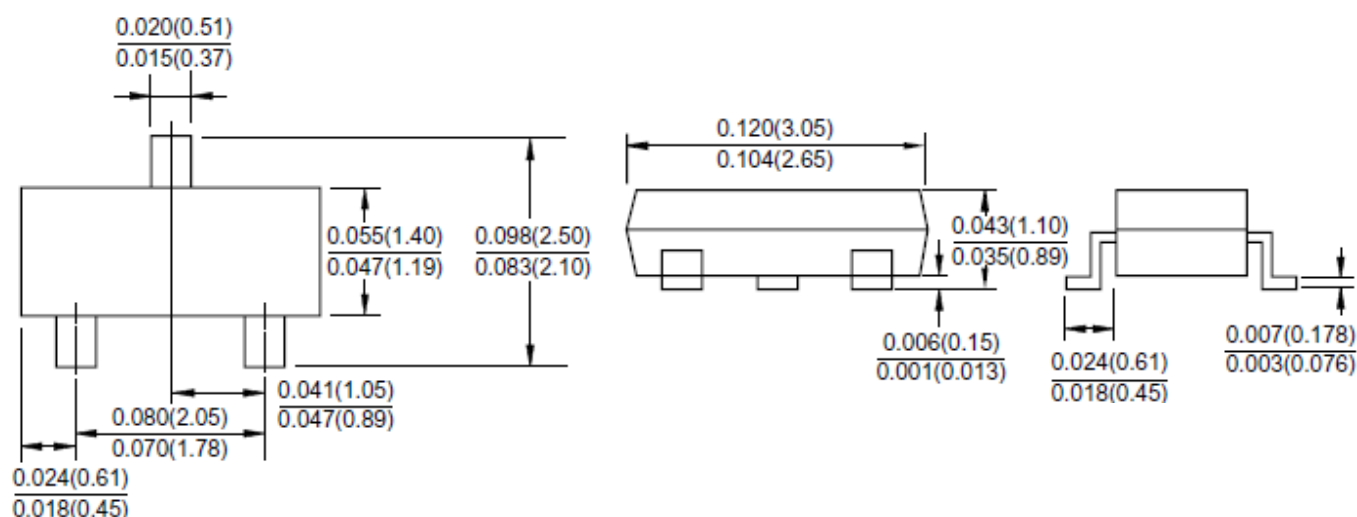


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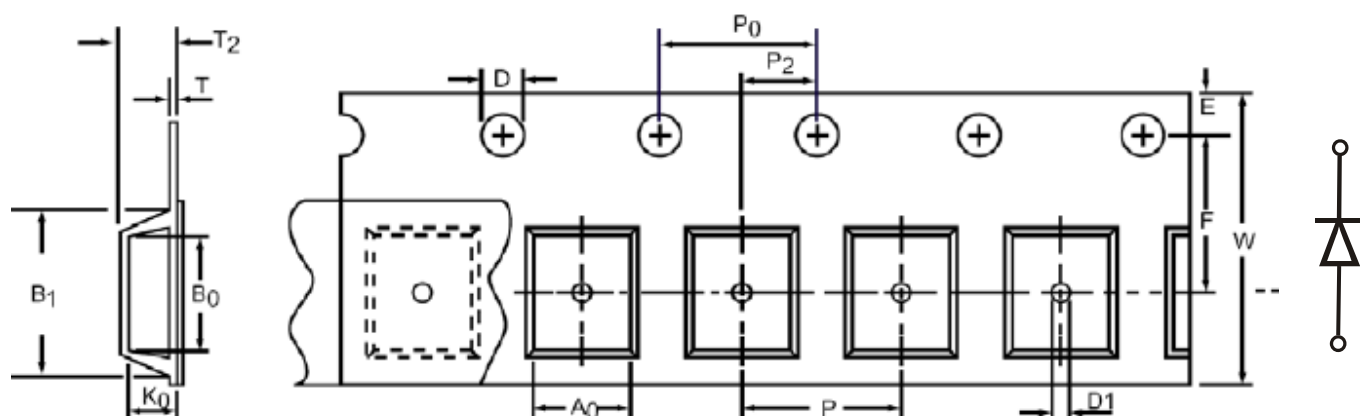
Dimensions in inch (mm)

SOT-23



Packing Information:

Carrier Tape Dimensions (in mm)

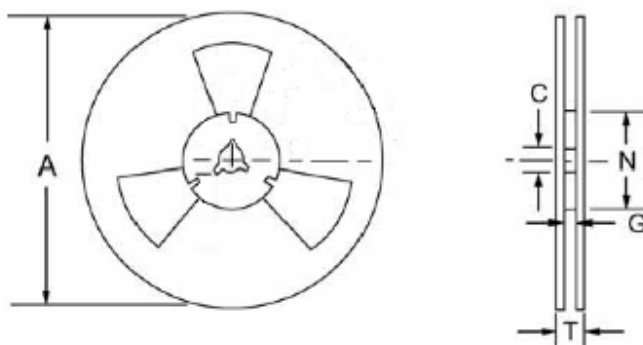


Product Type	D	P0	P	W	E	A0	B0
	1.55±0.05	4.0±0.10	4.0±0.10	8.0+0.3/-0.1	1.75±0.10	3.15±0.10	2.77±0.10
SOT- 23	B1	T	T2	D1	F	K0	P2
	4.0±0.10	0.20±0.05	1.4 max	1.0±0.05	3.5±0.05	1.0±0.10	2.0±0.05

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MMBD3004A/C/S

Reel Dimensions (in mm)



A	C	G	N	T
178.0	13.0+0.5/-0.2	9.9 max.	54.5±0.5	14.4 max.
330.0	13.0+0.5/-0.2	9.9 max.	100.0±0.5	14.4 max.

Packing Quantity

Quantity	PCS per Reel	PCS per Carton
TR70 Tape & Reel	3,000	240,000
TR30 Tape & Reel	12,000	144,000

Carton Size Information: (in mm)

Size	Cartoon Size
TR70 Tape & Reel	390x270x400
TR30 Tape & Reel	375x360x213

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MMBD3004A/C/S

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