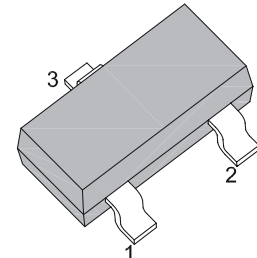


Three Terminals SMD Switching Diodes

Features

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

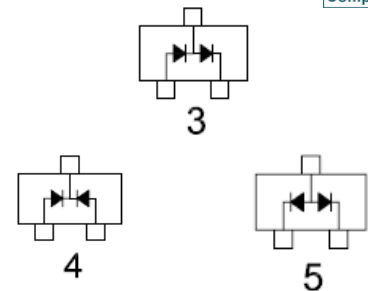


SOT-23



Mechanical Data

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



Maximum Ratings *(T_{Ambient}=25°C unless noted otherwise)*

Symbol	Description	MMBD3004A	MMBD3004C	MMBD3004S	Unit	Conditions
	Pinout Figure	5	4	3		
	Marking Code	P11	P12	P13		
V_{RWM}	Working Peak Reverse Voltage DC Blocking Voltage	300			V	
V_{RRM}	Peak Reverse Voltage	350			V	
V_{R(RMS)}	RMS Reverse Voltage	212			V	
I_F	Forward Continuous Current	225			mA	Note 1
I_{FRM}	Peak Repetitive Forward Current	625			mA	Note 1
I_{FSM}	Peak Forward Surge Current	4			A	t=1.0μs
		1				t=1.0s
P_D	Power Dissipation	350			mW	Note 1
R_{thJA}	Thermal Resistance from Junction to Ambient Air	357			° C/W	Note 1

Three Terminals SMD Switching Diodes

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 =150μA
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
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 =100Ω

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

Typical Characteristics Curves

Fig.1- Typical Forward Characteristics

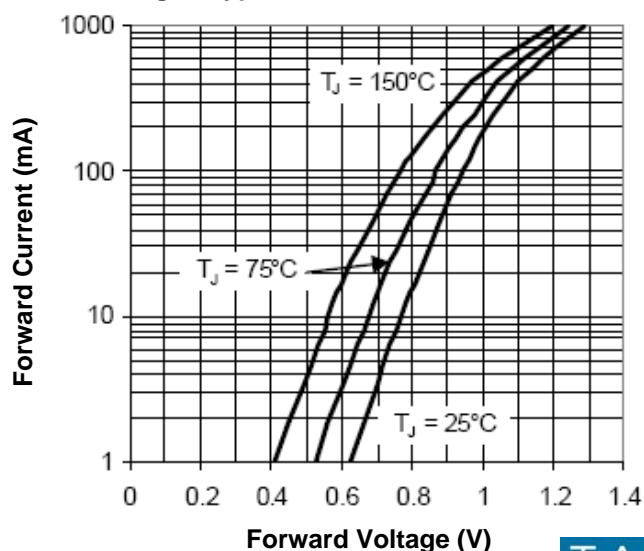
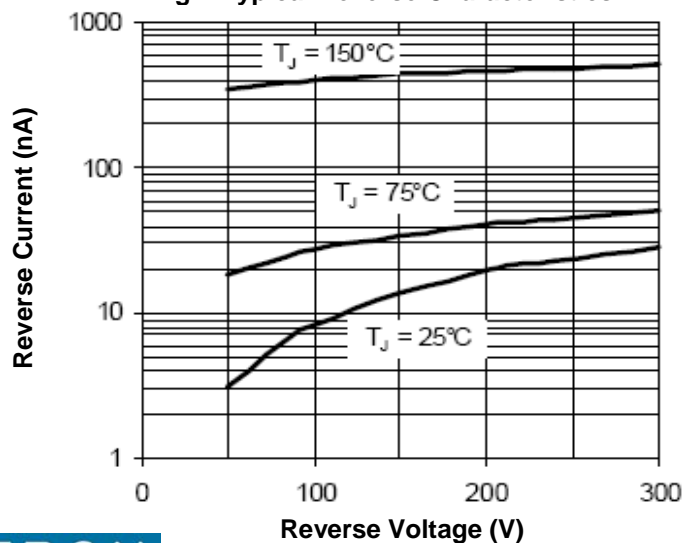


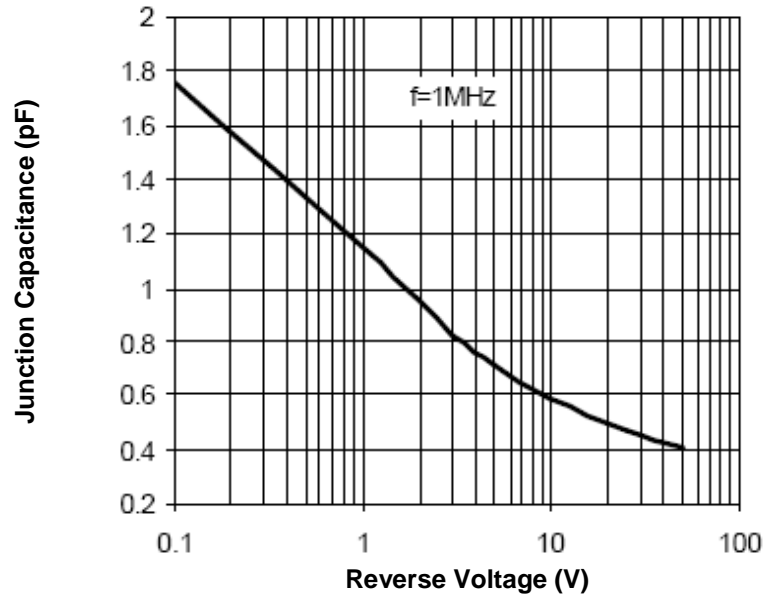
Fig.2-Typical Reverse Characteristics



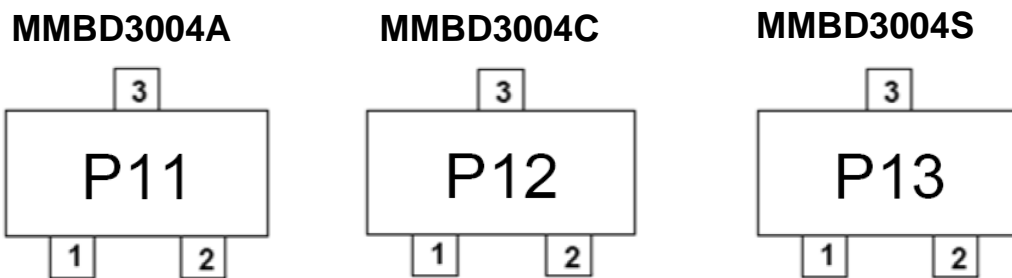
Three Terminals SMD Switching Diodes

MMBD3004A/C/S

Fig.3- Typical Junction Capacitance



Marking Information:

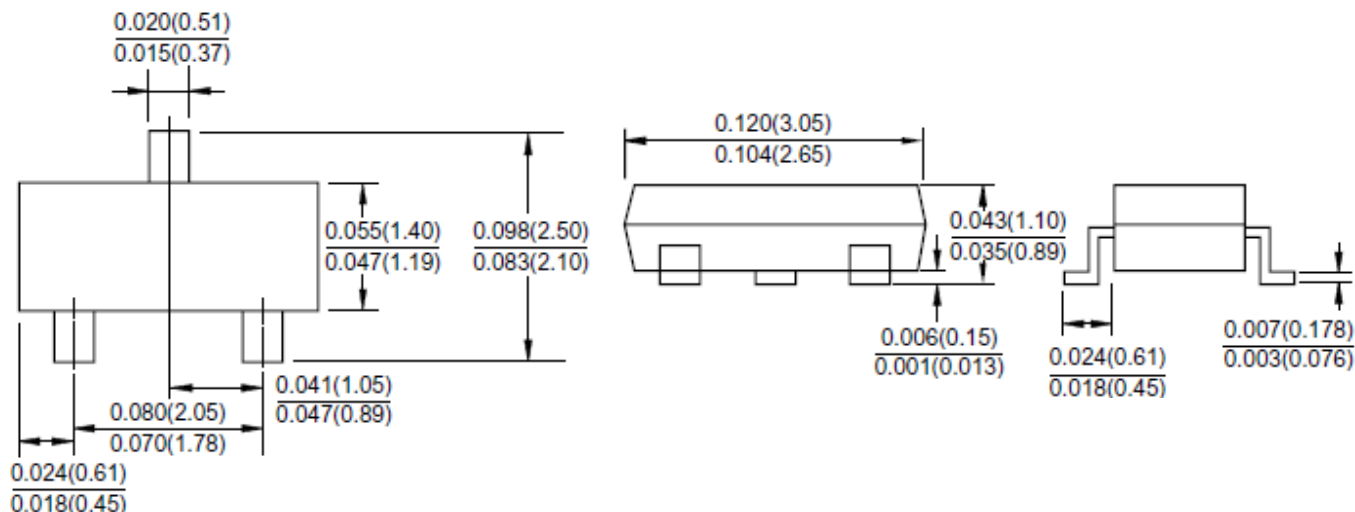


Three Terminals SMD Switching Diodes

MMBD3004A/C/S

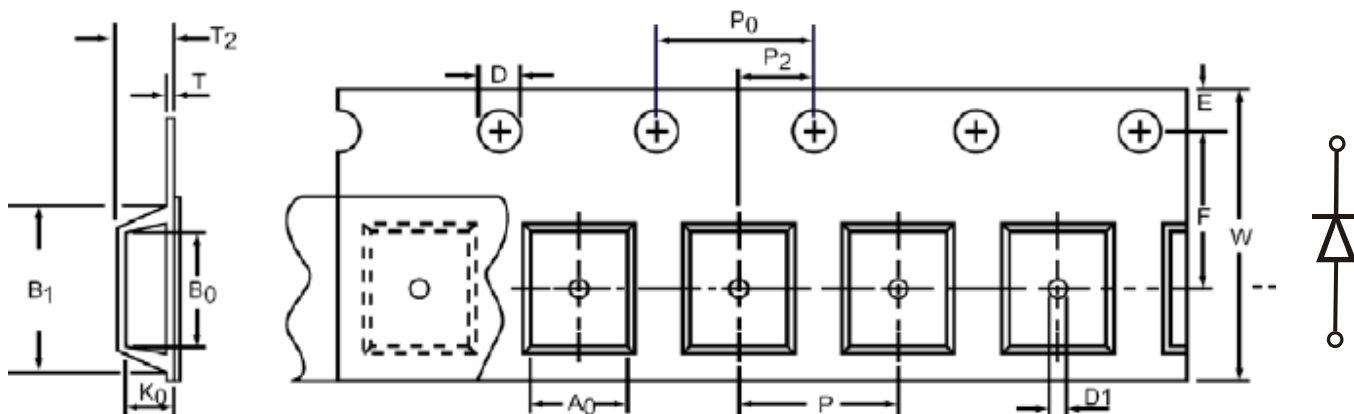
Dimensions in inch (mm)

SOT-23



Packing Information:

Carrier Tape Dimensions (in mm)

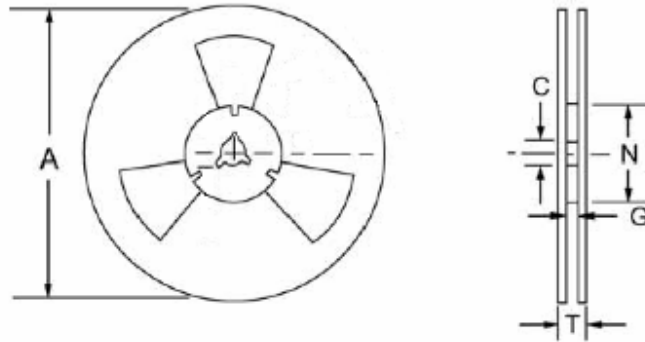


Product Type	D	P0	P	W	E	A0	B0
		1.55±0.05	4.0±0.10	4.0±0.10	8.0+0.3/-0.1	1.75±0.10	3.15±0.10
SOT- 23	B1	T	T2	D1	F	K0	P2
	4.0±0.10	0.20±0.05	1.4 max	1.0±0.05	3.5±0.05	1.0±0.10	2.0±0.05

Three Terminals SMD Switching Diodes

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

Three Terminals SMD Switching Diodes

MMBD3004A/C/S

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