



MMBV1321

SURFACE MOUNT PIN DIODE

VOLTAGE 60 Volts **DCK 9F** 250 mW

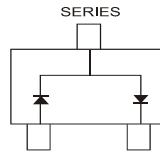
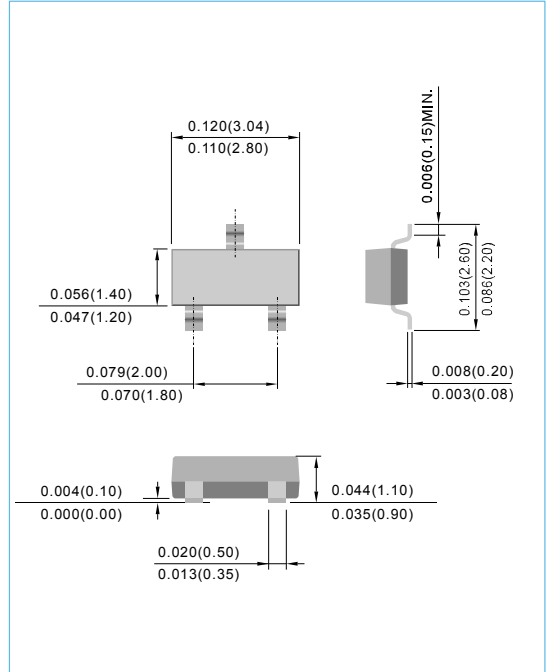
SOT-23 Unit : inch(mm)

FEATURES

- High voltage,current controlled
- RF resistor for RF attenuators and switches
- Low diode forward resistance
- Very low series inductance
- For applications up to 3 GHz
- Low capacitance
- Surface mount package ideally suited for automatic insertion
- Lead free in comply with EU RoHS 2002 95 EC directives.
- 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: 0.008 grams
- Device Marking: VA3



ABSOLUTE RATINGS (T_A=25°C)

Parameter	Symbol	Value	Units
Maximum Recurrent Peak Reverse Voltage	V _R	60	V
Maximum Average Forward Current	I _F	100	mA
Total power dissipation	P _{TOT}	250	mW
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 150	°C



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ELECTRICAL CHARACTERISTICS (T_J=25°C)

PARAMETER	SYMBOL	CONDITIONS	TYP.	MAX.	UNIT
Per Diode					
Forward Voltage	V _F	-	0.9	1.1	V
Reverse Leakage Current	I _R	V _R = 60V	-	100	nA
Diode Capacitance	C _D	V _R = 0V f = 1MHz	0.85	-	pF
		V _R = 1V f = 1MHz	0.6	0.7	pF
		V _R = 20V f = 1MHz	0.42	0.5	pF
Diode Forward Resistance	r _D	I _F = 0.5mA f = 100MHz	2.3	5.0	Ω
		I _F = 1mA f = 100MHz	1.7	3.6	Ω
		I _F = 10mA f = 100MHz	0.8	1.8	Ω
		I _F = 100mA f = 100MHz	0.6	1.3	Ω
Isolation	S ₂₁ ²	V _R = 0V f = 900MHz	7.2	-	dB
		V _R = 0V f = 1800MHz	4.7	-	dB
		V _R = 0V f = 2450MHz	3.8	-	dB
Insertion Loss	S ₂₁ ²	I _F = 0.5mA f = 900MHz	0.23	-	dB
		I _F = 0.5mA f = 1800MHz	0.25	-	dB
		I _F = 0.5mA f = 2450MHz	0.38	-	dB
Insertion Loss	S ₂₁ ²	I _F = 1mA f = 900MHz	0.17	-	dB
		I _F = 1mA f = 1800MHz	0.20	-	dB
		I _F = 1mA f = 2450MHz	0.34	-	dB
Insertion Loss	S ₂₁ ²	I _F = 10mA f = 900MHz	0.12	-	dB
		I _F = 10mA f = 1800MHz	0.14	-	dB
		I _F = 10mA f = 2450MHz	0.28	-	dB
Insertion Loss	S ₂₁ ²	I _F = 100mA f = 900MHz	0.11	-	dB
		I _F = 100mA f = 1800MHz	0.13	-	dB
		I _F = 100mA f = 2450MHz	0.26	-	dB



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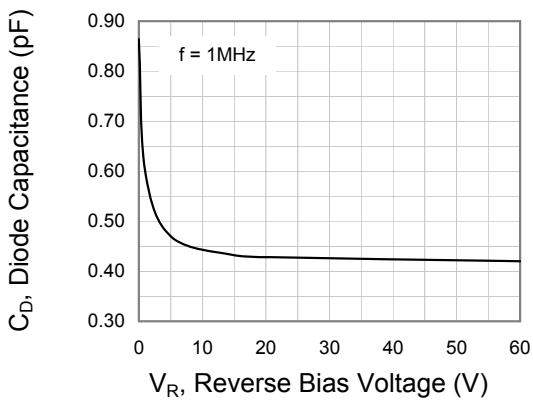


Fig.1 Typical Diode Capacitance

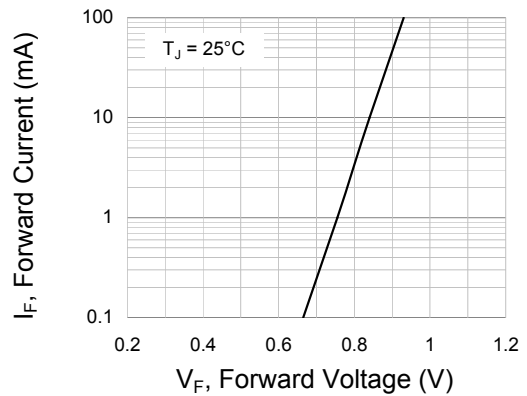


Fig.2 Typical Forward Characteristics

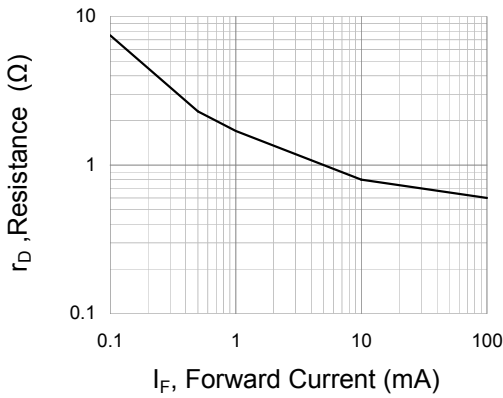


Fig.3 Series Resistance

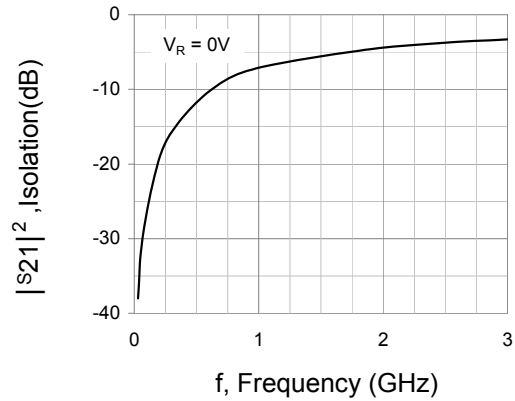


Fig.4 Isolation $|s_{21}|^2$

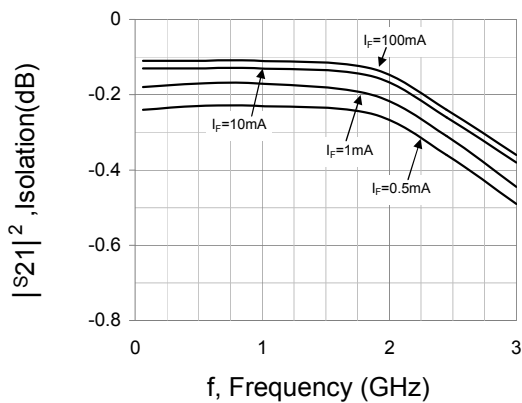
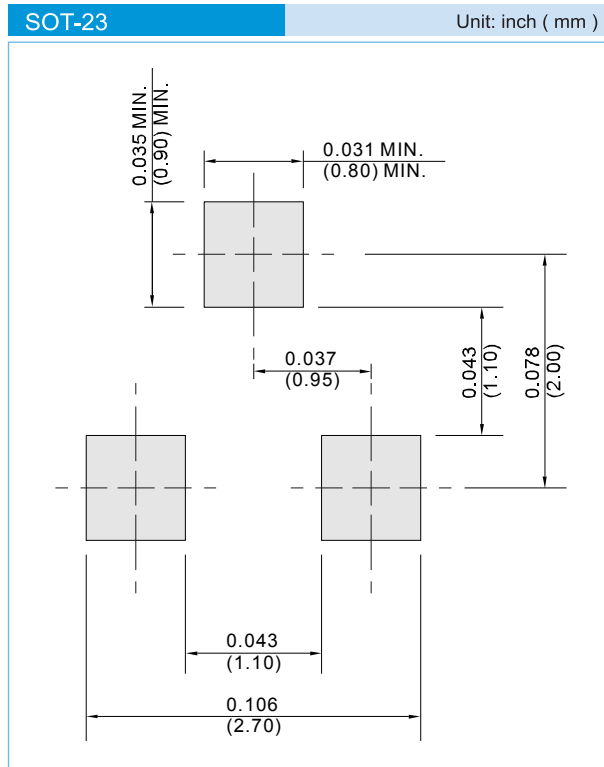


Fig.5 Isolation $|s_{21}|^2$



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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

MMBV1321_R1_00001

MMBV1321_R2_00001

For example :

RB500V-40_R2_00001



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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