

## Small Signal Product

### 350mW, SMD Switching Diode

**FEATURES**

- Fast switching speed
- Surface mount device type
- Moisture sensitivity level 1
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate
- Pb free version and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)


**SOT-23**

**MECHANICAL DATA**

- Case: SOT-23 small outline plastic package
- Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed : 260°C/10s
- Weight: 8 ± 0.5 mg

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P <sub>D</sub>	350	mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	350	V
Repetitive Peak Forward Current	I <sub>FRM</sub>	625	mA
Mean Forward Current	I <sub>O</sub>	225	mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	4 1	A
		Pulse Width=1μs Pulse Width=1s	
Thermal Resistance (Junction to Ambient)	R <sub>θJA</sub>	357	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	I <sub>R</sub> =100μA V <sub>(BR)</sub>	350	-	V
Forward Voltage	I <sub>F</sub> =100mA V <sub>F</sub>	-	1.00	V
	I <sub>F</sub> =200mA	-	1.25	
Reverse Leakage Current	V <sub>R</sub> =240V I <sub>R</sub>	-	0.1	μA
	V <sub>R</sub> =240V, T <sub>J</sub> =150°C	-	100	
Junction Capacitance	V <sub>R</sub> =1V, f=1.0MHz C <sub>J</sub>	-	5	pF
Reverse Recovery Time	I <sub>F</sub> =I <sub>R</sub> =30mA, R <sub>L</sub> =100Ω, I <sub>RR</sub> =0.1I <sub>R</sub> t <sub>rr</sub>	-	50	ns

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RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig. 1 Typical Forward Characteristics

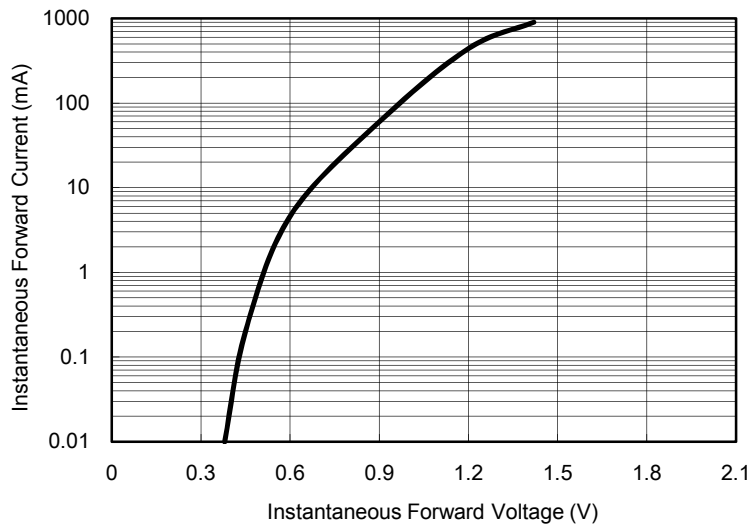


Fig. 2 Typical Reverse Characteristics

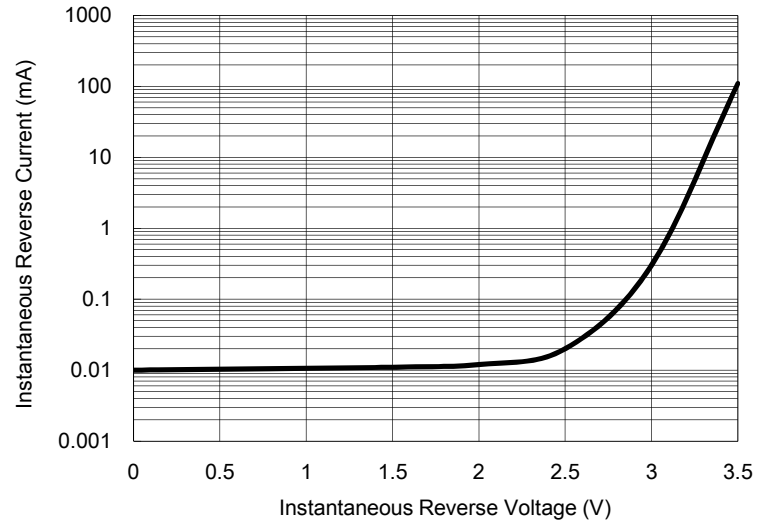


Fig. 3 Admissible Power Dissipation Curve

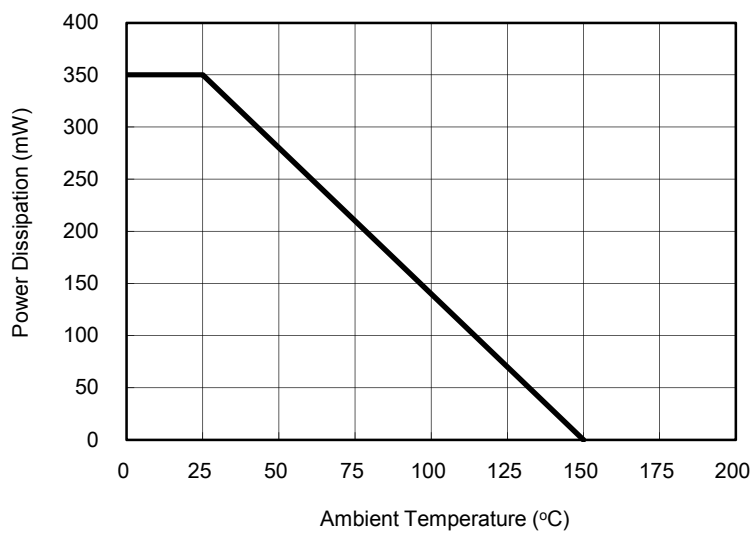
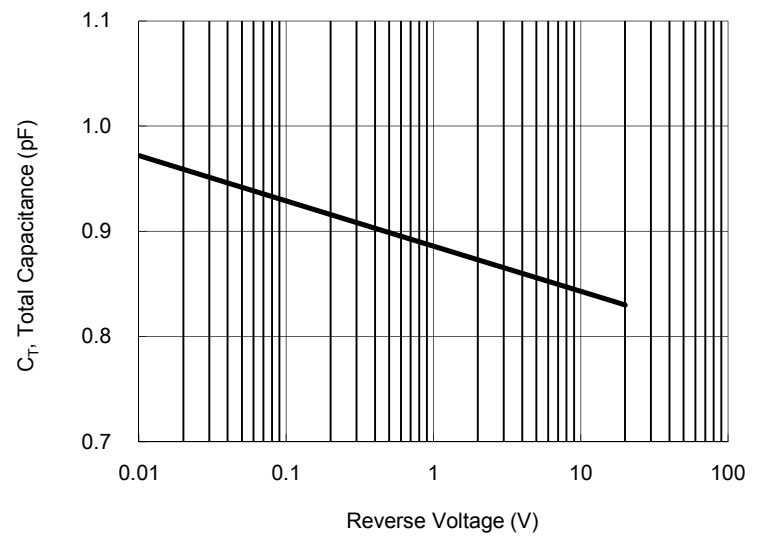


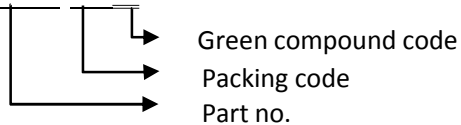
Fig. 4 Typical Capacitance VS. Reverse Voltage



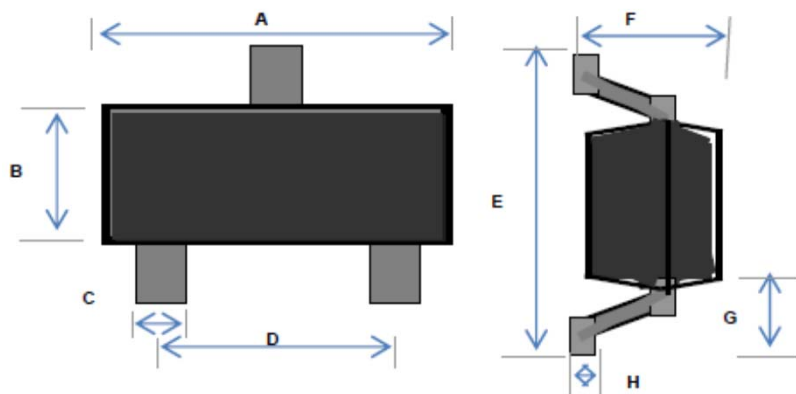
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ORDER INFORMATION (EXAMPLE)

MMBD3004 RFG

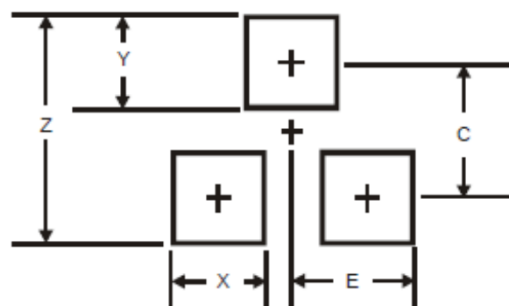


PACKAGE OUTLINE DIMENSIONS  
**SOT-23**



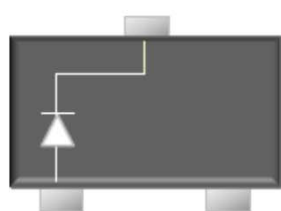
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.10 REF		0.004 REF	

SUGGEST PAD LAYOUT

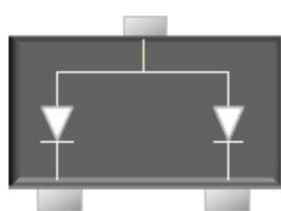


DIM.	Unit (mm)		Unit (inch)	
	Typ.		Typ.	
Z	2.8		0.110	
X	0.7		0.028	
Y	0.9		0.035	
C	1.9		0.075	
E	1.0		0.039	

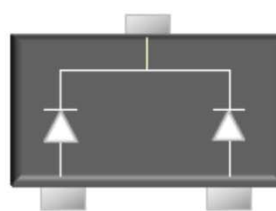
PIN CONFIGURATION



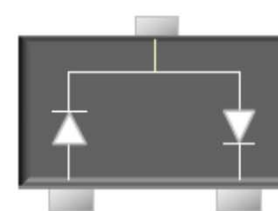
**MMBD3004**



**MMBD3004CA**



**MMBD3004CC**



**MMBD3004SE**

MARKING

Part No.	Marking
MMBD3004	HC
MMBD3004CA	RA
MMBD3004CC	PZ
MMBD3004SE	PY

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