

Small Signal Product

## Fast Recovery Rectifier Diode

### FEATURES

- Surface mount device type
- Moisture sensitivity level (MSL): 3
- Pb free and RoHS compliant
- High Frequency Rectification
- Ideal for Surface Mounted Applications
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



SOD-123



### MECHANICAL DATA

- Case: Bend lead SOD-123 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
- Polarity: Indicated by cathode band
- Marking: R6D

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	600	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	420	V
Average Rectified Output Current	I <sub>o</sub>	1	A
Non-Repetitive Peak Forward Surge Current @t ≤ 8.3 ms	I <sub>FSM</sub>	18	A
Power Dissipation	P <sub>D</sub>	415	mW
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	301	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	- 55 to +150	°C

PARAMETER	SYMBOL	MIN	TYP	MAX	TEST CONDITION	UNIT
Reverse Leakage Current	I <sub>R</sub>	-	-	1	V <sub>R</sub> =600V	μA
Forward Voltage	V <sub>F</sub>	-	-	1.15	I <sub>F</sub> =0.7A	V
		-	-	1.3	I <sub>F</sub> =1.0A	V
Total Capacitance	C <sub>tot</sub>	-	15	-	V <sub>R</sub> =0V, f=1.0MHz	pF
Reverse Recovery Time (Note 1)	t <sub>rr</sub>	-	-	150	-	ns

Note 1: Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A

Small Signal Product

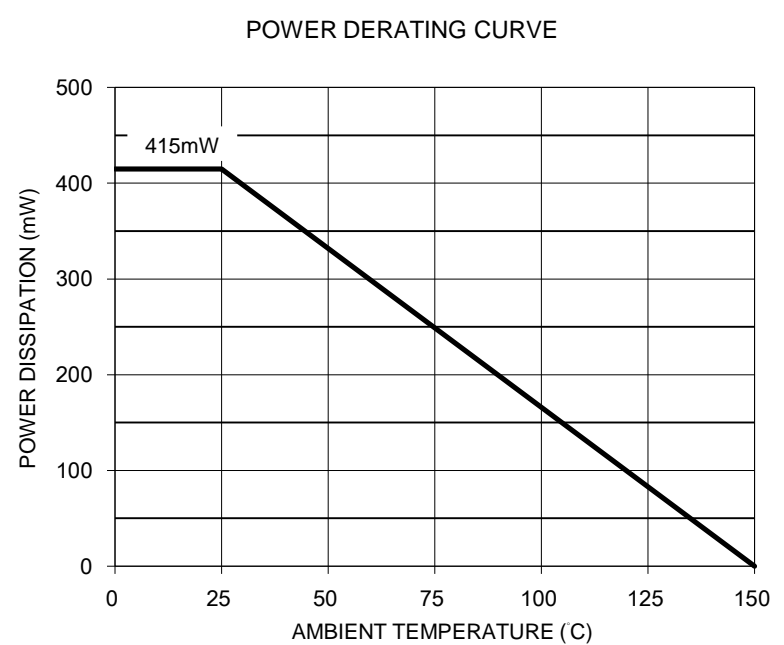
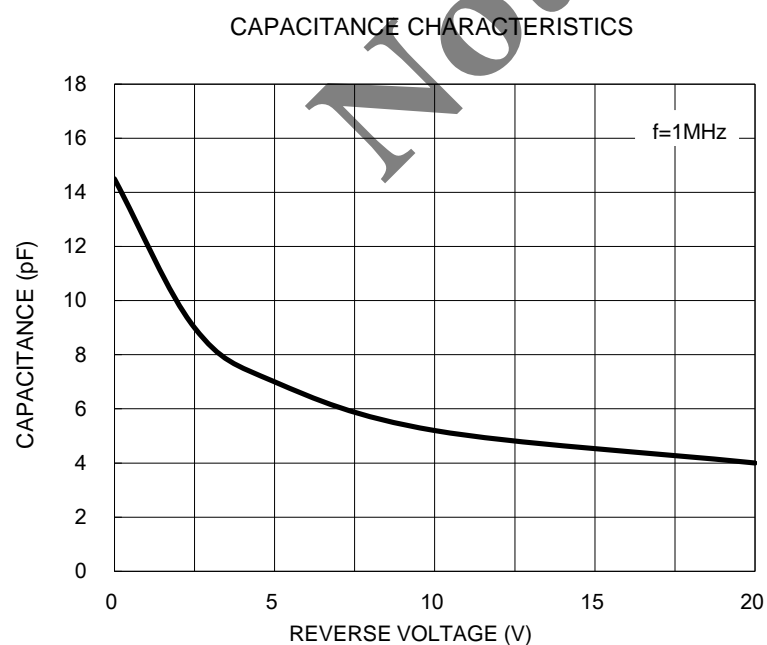
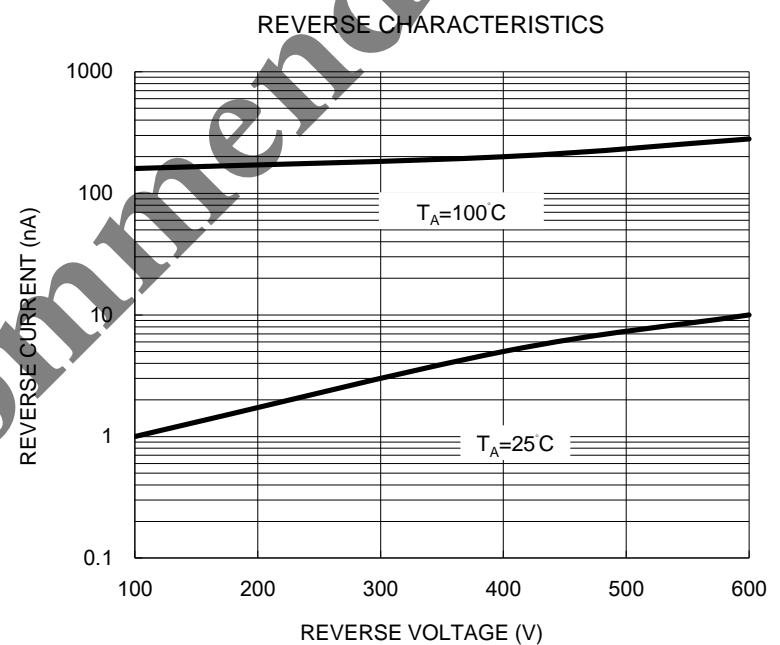
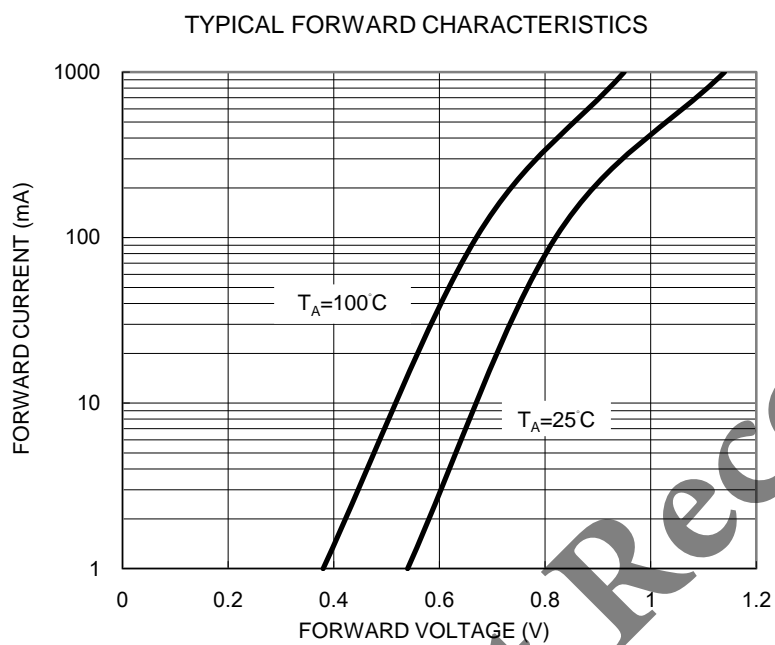
ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
RS1006D1	RI	G	SOD-123	3K / 7" Reel

Note: Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
RS1006D1 RIG	RS1006D1	RI	G	Green compound

**RATINGS AND CHARACTERISTICS CURVES**

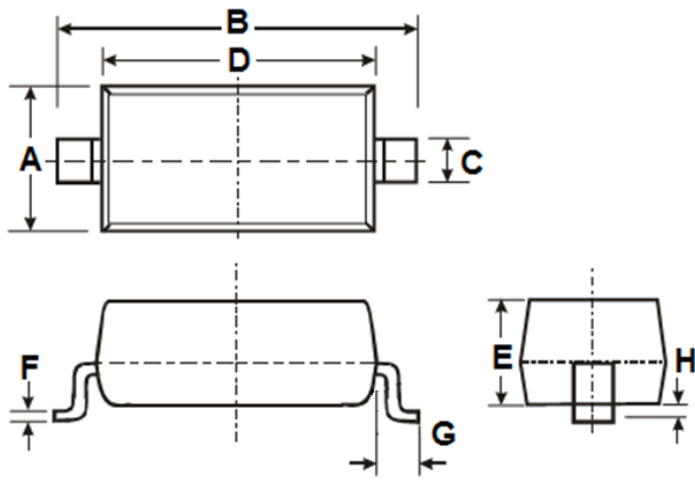
( $T_A=25^\circ\text{C}$  unless otherwise noted)



Small Signal Product

**DIMENSIONS**

SOD-123



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004

*Not Recommended*