

General description

General Application Schottky barrier rectifier, encapsulated in a SOD523 leadless ultra small Surface-Mounted Device (SMD) plastic package.

Features and benefits

- Average forward current: $I_{F(AV)} \leq 1.0A$
- Reverse voltage: $V_R \leq 40 V$
- Low forward voltage: $V_F \leq 600 mV @1.0A$
- Low reverse current: $I_R \leq 10.0 \mu A @40V$
- Leadless ultra small SMD plastic package
- We declare that the material of product compliance with RoHS requirements and Halogen Free

Application information

- Low voltage rectification
- High efficiency DC-to-DC conversion
- Switch Mode Power Supply (SMPS)
- Reverse polarity protection
- Low power consumption applications

Ordering information

Device	Package	Marking	Packaging
B1040X	SOD523	4A	3000/Tape & Reel

Schematic & Pin configuration

Simplified outline	Graphic symbol

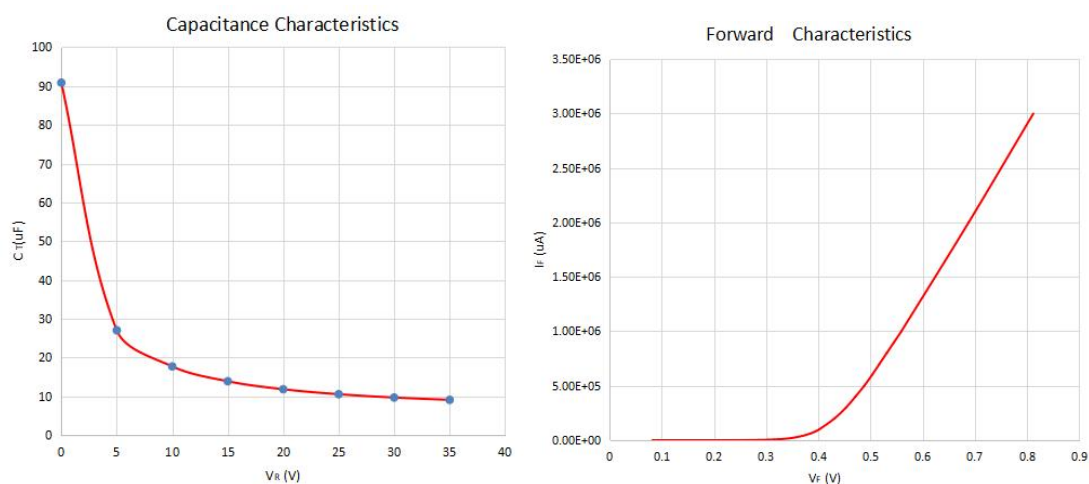
Maximum Ratings ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

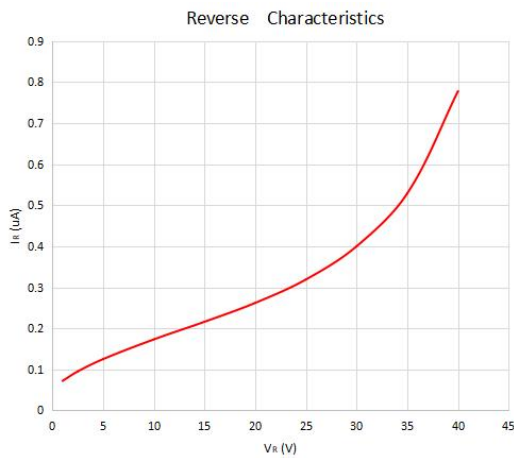
Parameter	Symbol	Value	Unit
DC reverse voltage	V_R	40	V
Average rectified forward current	I_O	1.0	A
Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	7.0	A
Power Dissipation	P_D	0.5	W
Junction temperature	T_j	-40 to 125	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-50 to 150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Condition
Reverse voltage	V_{BR}	40	--	--	V	$I_R=1\text{mA}$
Reverse current	I_R	--	--	10.0	μA	$V_R=40\text{V}$
Reverse current	I_R	--	--	1.0	μA	$V_R=10\text{V}$
Forward voltage	V_F	--	--	0.60	V	$I_F=1.0\text{A}$
		--	--	0.45	V	$I_F=0.2\text{A}$
		--	--	0.42	V	$I_F=0.1\text{A}$
Capacitance between terminals	C_T	--	91	--	pF	$V_R=0\text{V}, f=1\text{MHz}$

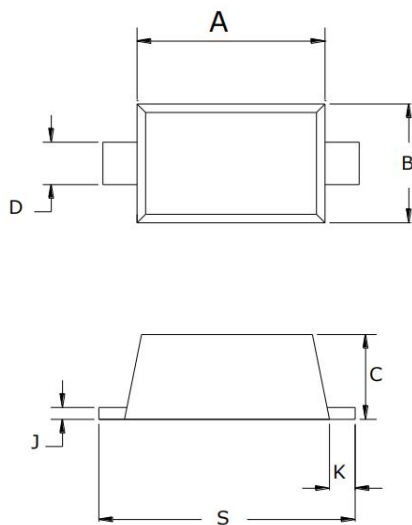
Typical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$)





Package Outline Dimensions

SOD523



SYMBOL	Dimensions In Millimet	
	MIN	MAX
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
J	0.07	0.20
K	0.15	0.25
S	1.50	1.70