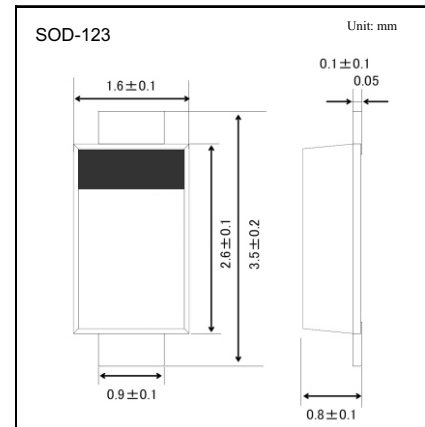


Switching Diodes

SBR2A40P1

■ Features

- Low Forward Voltage Drop
- Low Leakage Current
- Superior Reverse Avalanche Capability
- Excellent High Temperature Stability
- Soft, Fast Switching Capability
- $\pm 16\text{KV}$ ESD Protection

■ Absolute Maximum Ratings $T_a = 25$

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_{RM}		
RMS Reverse Voltage	$V_{R(RMS)}$	28	
Average Rectified Output Current	I_o	2	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	50	A
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	180	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	
Storage temperature range	T_{STG}	-65 to 150	

■ Electrical Characteristics $T_a = 25$

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	$I_R = 100\mu\text{A}$	40			V
Forward voltage	V_F	$I_F = 100\text{mA}, T_J = 25$		0.265	0.315	
		$I_F = 1000\text{mA}, T_J = 25$		0.38	0.43	
		$I_F = 2000\text{mA}, T_J = 25$		0.45	0.50	
		$I_F = 100\text{mA}, T_J = 125$		0.17	0.22	
		$I_F = 1000\text{mA}, T_J = 125$		0.325	0.375	
		$I_F = 2000\text{mA}, T_J = 125$		0.42	0.47	
Reverse voltage leakage current	I_R	$V_R = 5\text{V}, T_J = 25$		8	40	μA
		$V_R = 40\text{V}, T_J = 25$		16	100	
		$V_R = 5\text{V}, T_J = 125$		1.3	8	mA
		$V_R = 40\text{V}, T_J = 125$		2.1	10	

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■ Typical Characteristics

