

## Description

The PNE20020ERX-JSM is a metal-to-silicon rectifier utilizing majority carrier conduction. It is designed for applications in low voltage, high frequency inverters, free wheeling, and polarity protection. With features such as low power loss, high efficiency, high current capability, low forward voltage, high surge capacity, and glass passivation, it offers reliable performance in relevant electronic circuits. The rectifier comes in the SOD-123FL package.



## Features

- ◆ Metal to silicon rectifier with majority carrier conduction.
- ◆ Low power loss and high efficiency.
- ◆ High current capability and low forward voltage.
- ◆ High surge capacity.
- ◆ Glass passivated.
- ◆ Suitable for low voltage, high frequency inverters, free wheeling, and polarity protection applications.

## Applications

- ◆ Low voltage, high frequency inverters.
- ◆ Free wheeling circuits.
- ◆ Polarity protection applications.

## Maximum Ratings And Electrical Characteristics

CHARACTERISTICS	SYMBOL	PNE20020ERX-JSM	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	125	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	V
Maximum Average Forward Rectified Current @T <sub>L</sub> =100 °C	I <sub>(AV)</sub>	2.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed On Rated Load (JEDEC Method)	I <sub>FSM</sub>	60	A
Maximum Forward Voltage at 2.0A DC	V <sub>F</sub>	0.95	V
Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Blocking Voltage @T <sub>J</sub> =100°C	I <sub>R</sub>	1.020	mA
Typical Junction Capacitance (Note1)	C <sub>J</sub>	200	pF
Typical Thermal Resistance (Note2)	R <sub>θJL</sub>	15	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150	°C

## Typical Performance Curves

FIG.1- PEAK FORWARD SURGE CURRENT

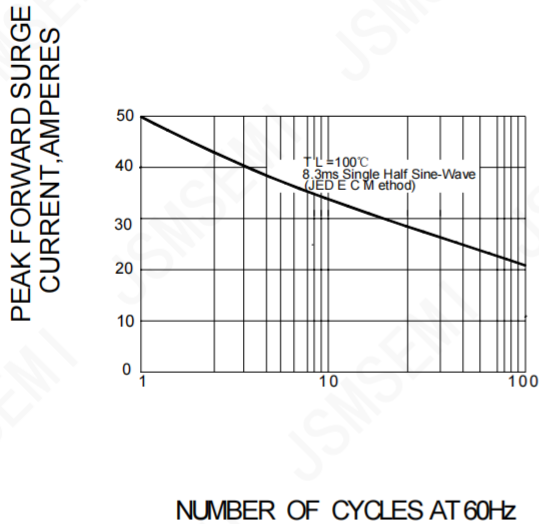


FIG.2 – TYPICAL FORWARD CHARACTERISTICS

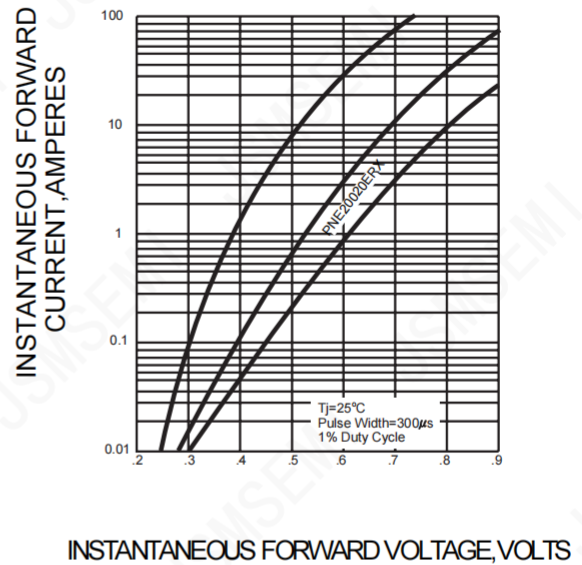
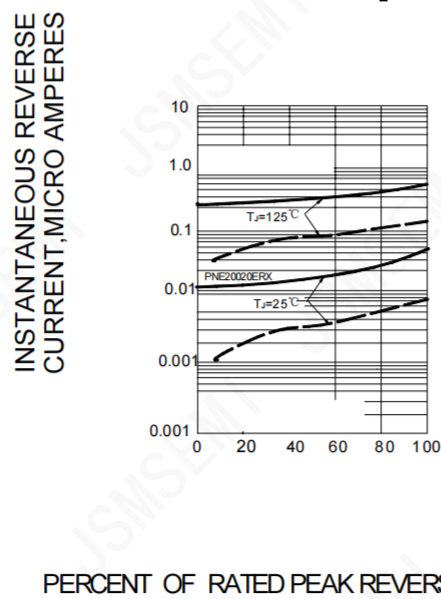
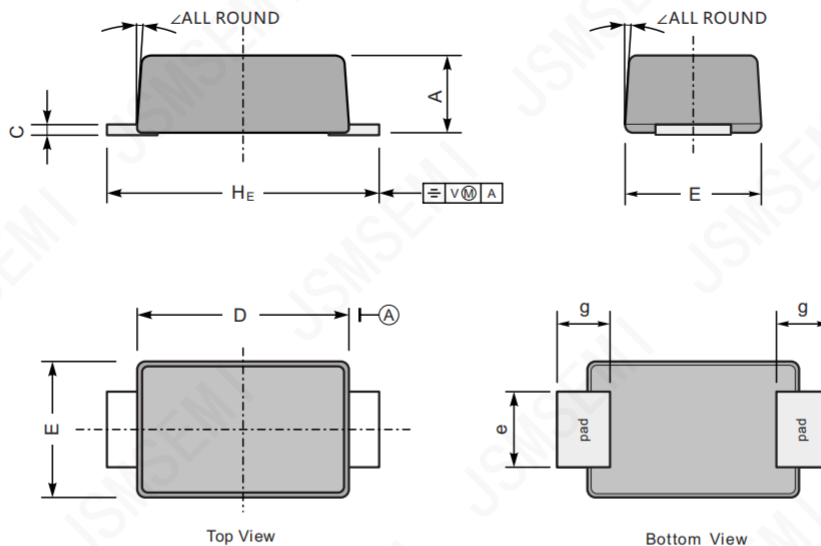


FIG.3 – TYPICAL REVERSE CHARACTERISTICS



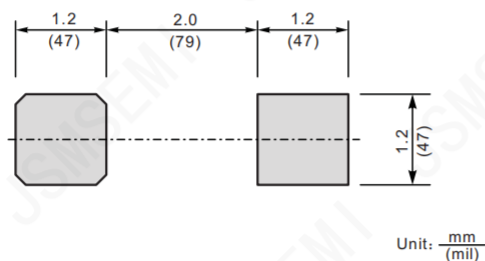
## SOD-123FL Package Outline Dimensions



Plastic surface mounted package; 2 leads

UNIT		A	C	D	E	e	g	H <sub>E</sub>	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

## The recommended mounting pad size



## Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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