

# Intelligent Smart Meter Diode

## FEATURES

- Vacuum welding
- Extremely low leakage current
- High junction temperature to 175°C
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- RoHS compliant, halogen free

**SMA**

**RoHS  
COMPLIANT**
**HALOGEN  
FREE**

## MECHANICAL DATA

- Case: SMA
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: color band denotes cathode end

## TYPICAL APPLICATION

Dedicated to intelligent smart meter.

## MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	3000	V
Maximum RMS voltage	$V_{RMS}$	2100	
Maximum DC blocking voltage	$V_{DC}$	3000	
Average Forward Rectified Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	$I_{FSM}$	50	A
Operating Junction Temperature Range	$T_J$	-55 to +175	°C
Storage Temperature Range	$T_{STG}$	-55 to +175	°C

## ELECTRICAL CHARACTERISTICS

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

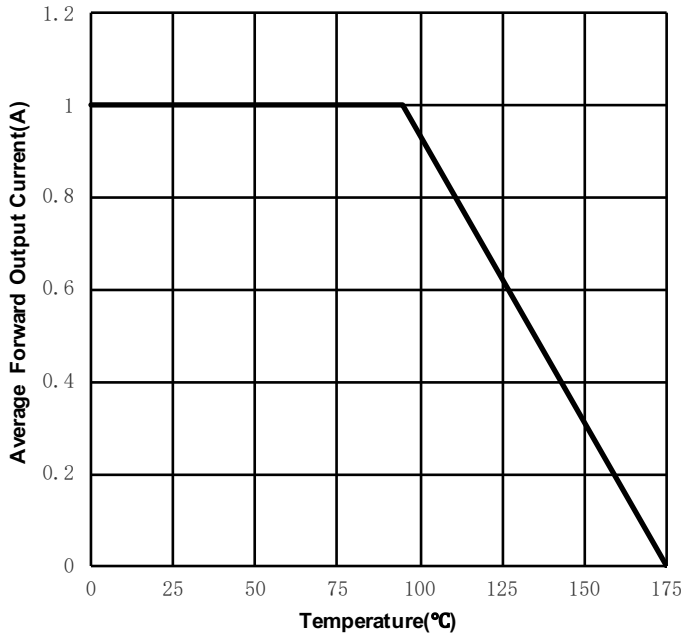
Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage	$I_F=1\text{A}$	$V_F$	1.85	2.0	V
Reverse Current @ $V_R=2800\text{V}$	$T_A=25^\circ\text{C}$	$I_R$	0.1	0.5	µA
	$T_A=125^\circ\text{C}$		5	20	
Typical Thermal Resistance (junction to ambient)		$R_{\theta JA}$	52		°C/W

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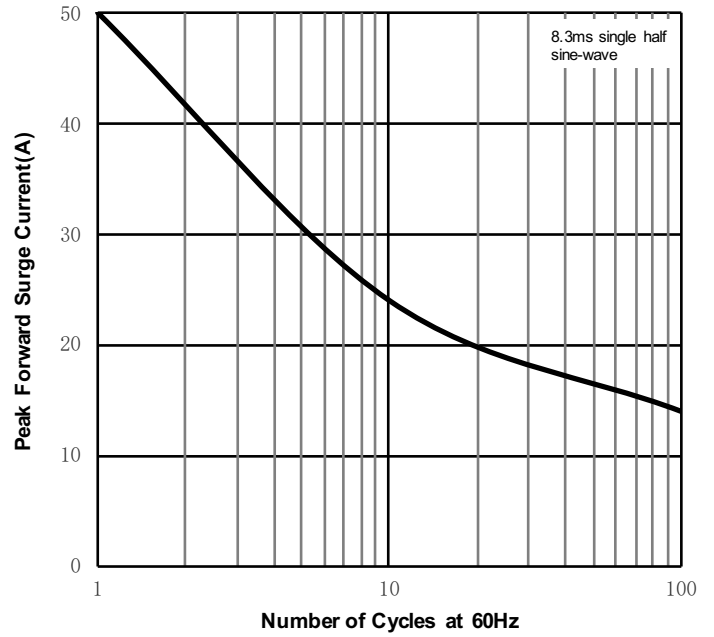
## RATINGS AND CHARACTERISTIC CURVES

T<sub>A</sub>=25°C unless otherwise noted

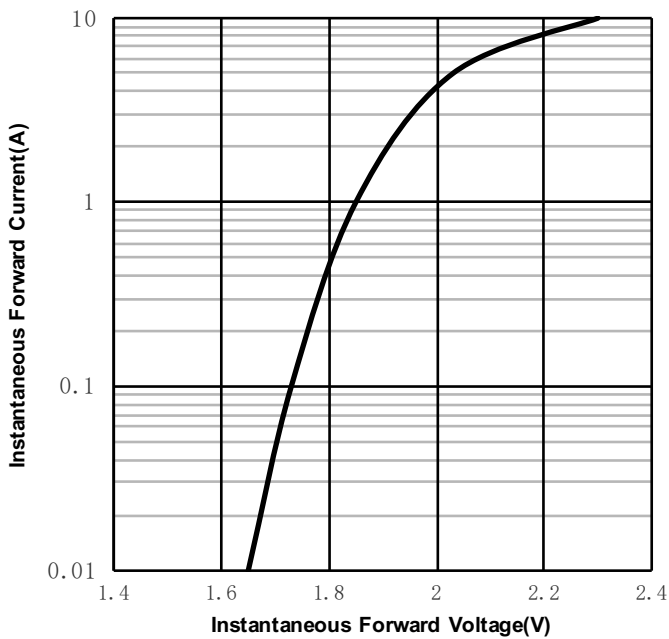
**FIG.1: Forward Output Current Derating Curve**



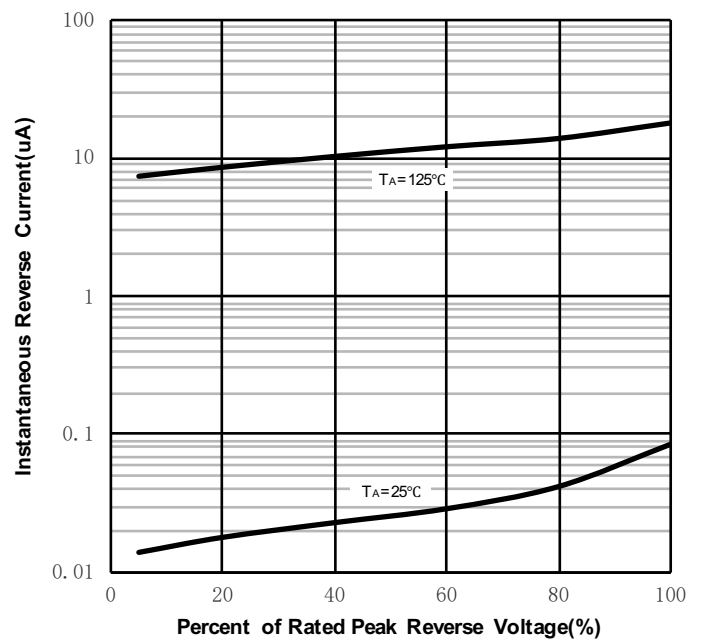
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**

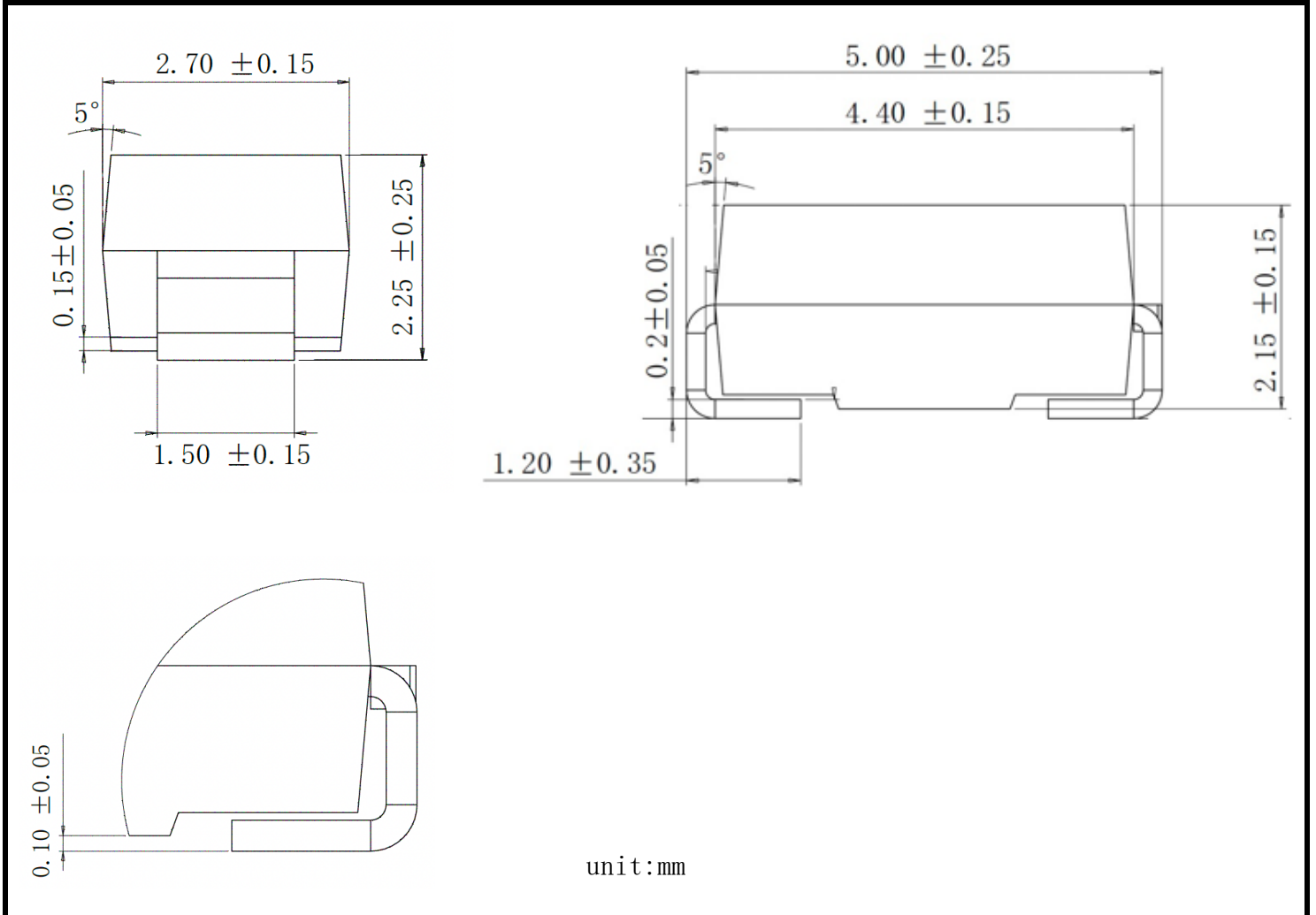


**FIG.4: Typical Reverse Characteristics**



# Intelligent Smart Meter Diode

## PACKAGE OUTLINE DIMENSIONS



## PACKING INFORMATION

Package	Reel(PCS)	Inner Box(PCS)	Carton(PCS)
SMA	5,000	10,000	80,000