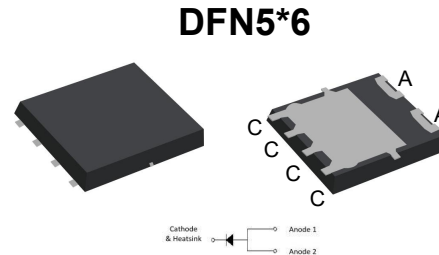


# 12A, 45V Low Forward Voltage Schottky Rectifier

## FEATURES

- Planar MOS schottky barrier diode
- Low forward voltage drop
- low profile - typical body height 1.0 mm
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- RoHS compliant
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT

**HALOGEN**  
**FREE**

## MECHANICAL DATA

- Case: DFN5\*6
- Case material: molding compound meets UL 94V-0 flammability rating

## TYPICAL APPLICATION

General purpose use in AC to DC wave rectification for SMPS, lighting, adapter, charger, home appliance, office equipment and telecommunication.

## MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	45	V
Average Forward Rectified Current	$I_{F(AV)}$	12	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	$I_{FSM}$	250	A
Operating Junction Temperature Range	$T_J$	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS

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

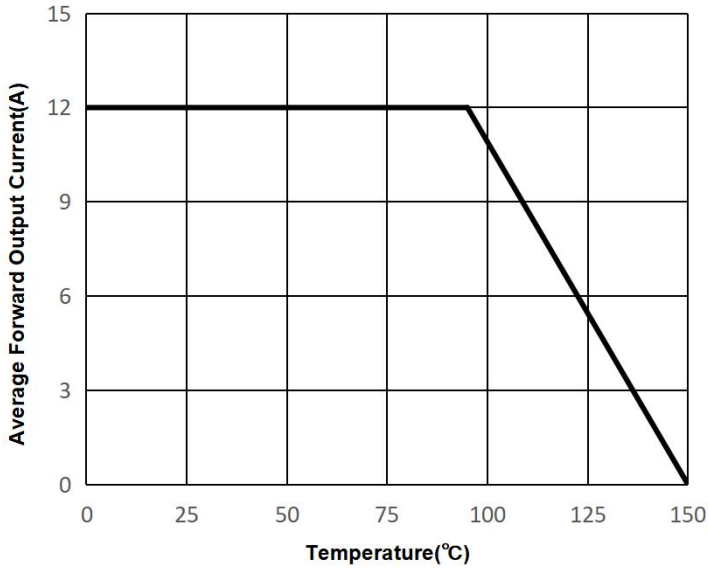
Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=12\text{A}$	$T_A=25^{\circ}\text{C}$	$V_F$	0.45	0.5	V
	$T_A=125^{\circ}\text{C}$		0.39	0.42	
Reverse Current @ $V_{RRM}$	$T_A=25^{\circ}\text{C}$	$I_R$	70	120	$\mu\text{A}$
	$T_A=125^{\circ}\text{C}$		45	80	mA
Typical Thermal Resistance (junction to case )		$R_{\theta JC}$	7		$^{\circ}\text{C}/\text{W}$

# 12A, 45V Low Forward Voltage Schottky Rectifier

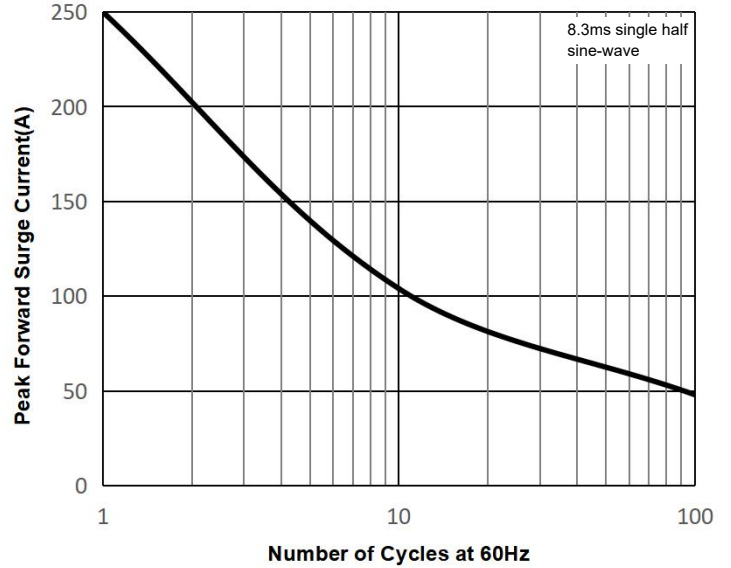
## RATINGS AND CHARACTERISTIC CURVES

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

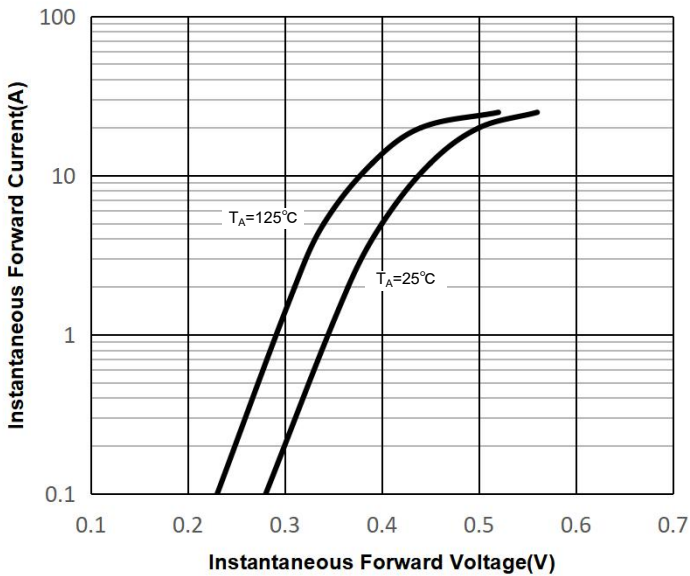
**FIG.1: Forward Output Current Derating Curve**



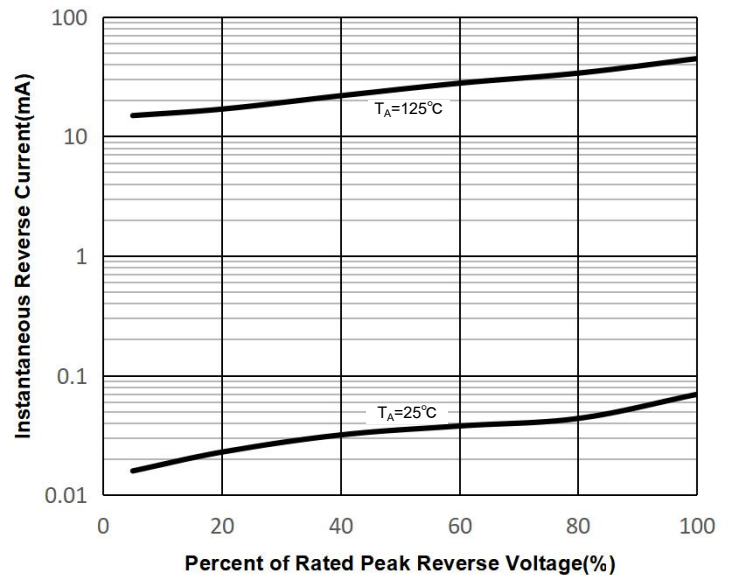
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**

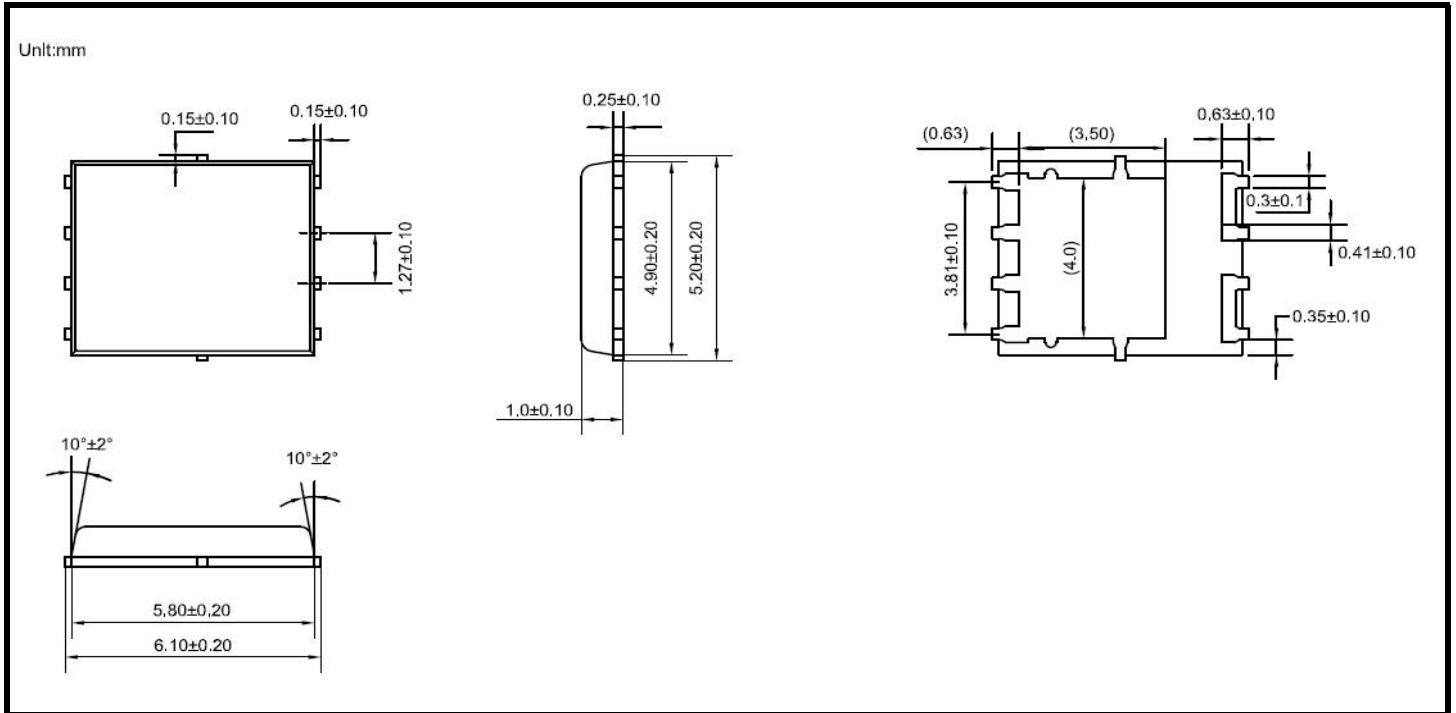


**FIG.4: Typical Reverse Characteristics**



# 12A, 45V Low Forward Voltage Schottky Rectifier

## PACKAGE OUTLINE DIMENSIONS



## PACKING INFORMATION

Package	Reel(PCS)	Inner Box(PCS)	Carton(PCS)
DFN5*6	3,000	3,000	18,000