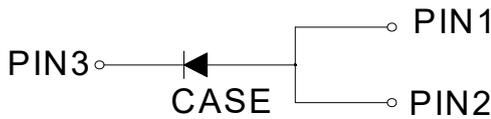
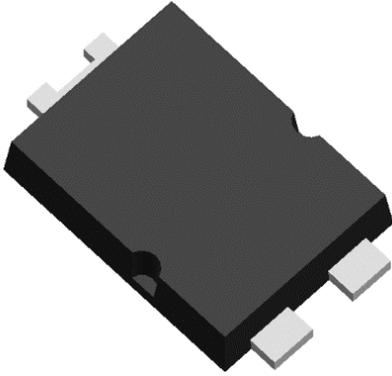


## Schottky Rectifier



### Features

- Ideal for automated placement
- Low power losses
- High forward surge capability
- Meets MSL level1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix "Q" means AEC-Q101 qualified

### Typical Applications

For use in lighting, fast switching rectification of power suppliers, DC/AC inverters, DC/DC converters, and freewheeling diodes for polarity protection application for consumer, automotive and telecommunication.

### Mechanical Data

- **Package:** TO-277  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS5U100PAQ
Device marking code			SS5U100PA
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	100
Average Rectified Output Current @60Hz -sine wave	$I_o$	A	5
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	$I_{FSM}$	A	200
Current Squared Time @1ms $\leq$ t $\leq$ 8.3ms $T_J=25^\circ\text{C}$	$I^2t$	A <sup>2</sup> s	166
Non-repetitive avalanche energy at $I_{AS}=2.0$ A, $T_J = 25^\circ\text{C}$	$E_{AS}$	mJ	20
Storage Temperature	$T_{stg}$	$^\circ\text{C}$	-55 ~+175
Junction Temperature	$T_J$	$^\circ\text{C}$	-55 ~+175

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Typ	Max	
Instantaneous forward voltage	$V_F$	V	$I_F=5.0\text{A}$	$T_A=25^\circ\text{C}$	0.725	0.8
				$T_A=125^\circ\text{C}$	0.585	0.68
Typical junction capacitance	$C_J$	pF	$V_R=4\text{V}$ , $f=1$ MHz	270	-	
Leakage Current	$I_R$	$\mu\text{A}$	$V_R=100\text{V}$	$T_A=25^\circ\text{C}$	0.3	10
		mA		$T_A=125^\circ\text{C}$	0.3	3



# SS5U100PAQ

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS5U100PAQ
Typical Thermal Resistance	R <sub>θJ-A</sub>	°C/W	65
	R <sub>θJ-A</sub>	°C/W	100 <sup>(2)</sup>
	R <sub>θJ-L</sub>	°C/W	3
	R <sub>θJ-C</sub>	°C/W	8 <sup>(1)</sup>

Note

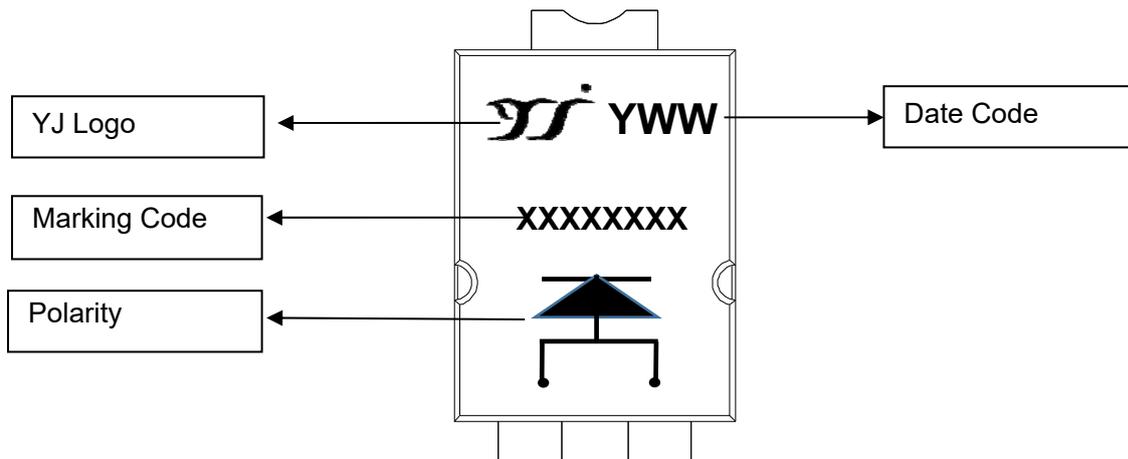
(1) Thermal resistance from junction to case mounted on P.C.B. with 16mm\*16mm copper pad areas

(2) Thermal resistance from junction to ambient mounted on P.C.B. with 10mm\*10mm copper pad areas

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS5U100PAQ	F1	Approximate 0.106	5000	10000	80000	13" reel

## ■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXXXXX is marking code, like SS5U100PA
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.  
For instance: The 15<sup>th</sup> week of 2019, date code is 915



## ■ Characteristics (Typical)

Fig.1:Forward Current Derating Curve

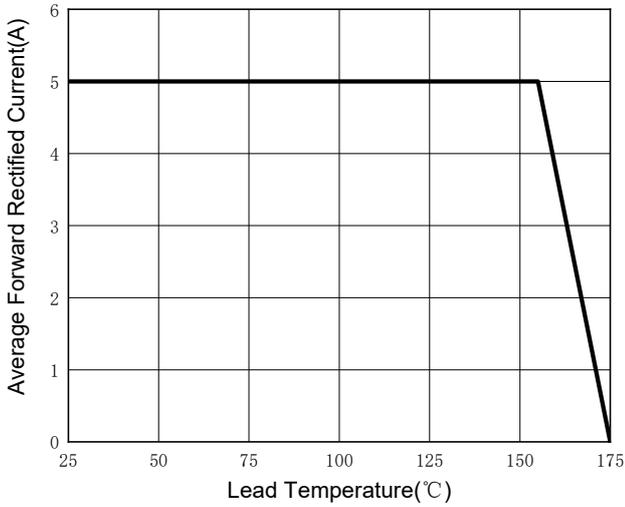


Fig.2:Forward Surge Current Capability

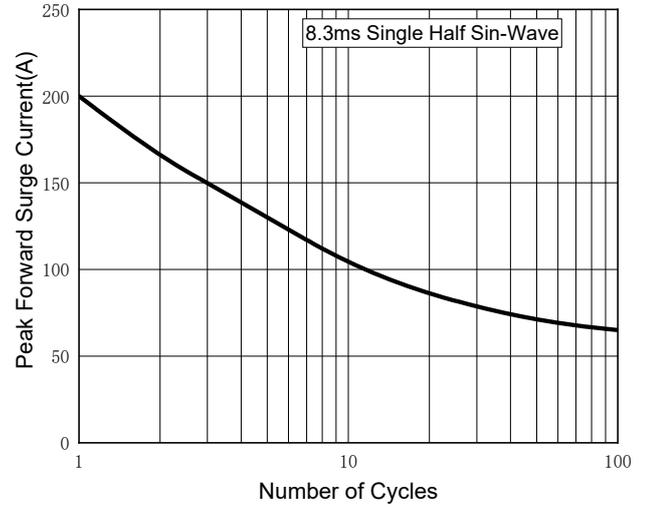


Fig.3:Typical Instantaneous Forward Characteristics

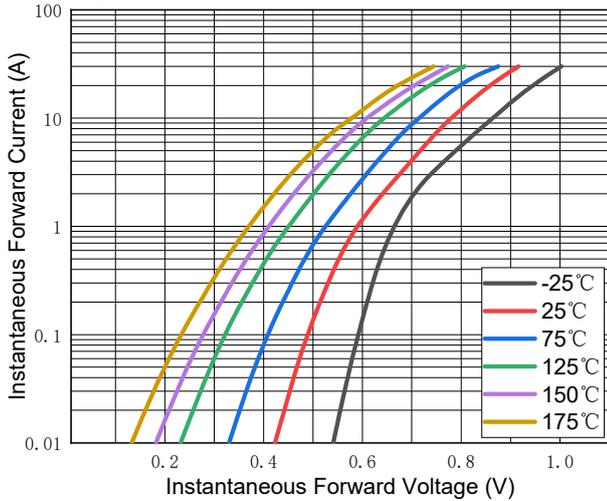
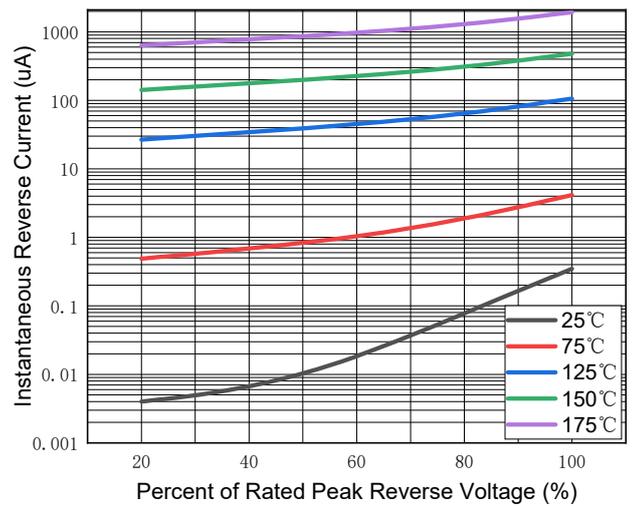


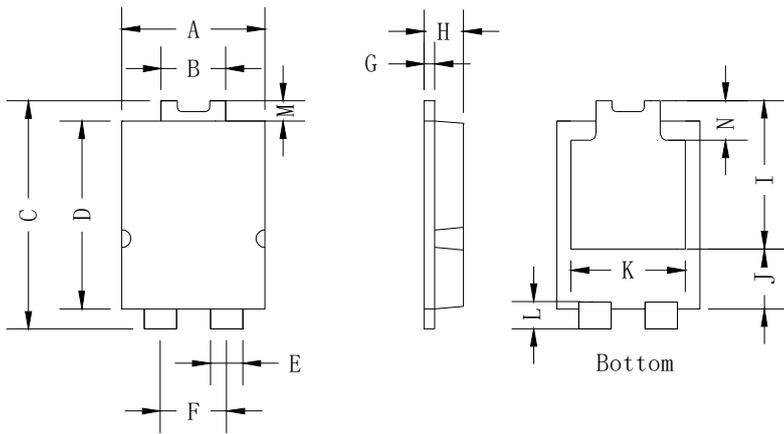
Fig.4:Typical Reverse Characteristics





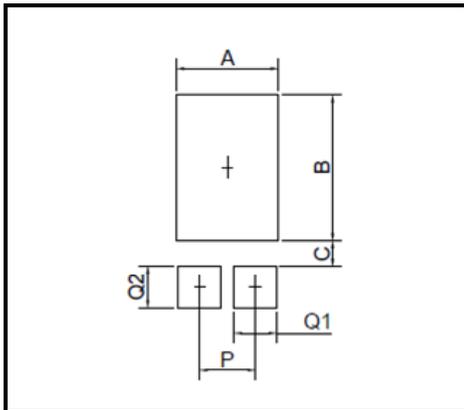
# SS5U100PAQ

## ■ Outline Dimensions



DIM	mm	
	MIN.	MAX.
A	3.90	4.10
B	1.70	1.90
C	6.40	6.60
D	5.30	5.50
E	0.80	1.00
F	1.85 ref.	
G	0.35	0.45
H	1.10	1.20
I	4.10	4.50
J	1.50	1.90
K	2.90	3.40
L	0.65	0.85
M	0.55 ref.	
N	1.15 ref.	

## ■ Suggested pad layout



DIM	MIN.(mm)
A	3.36
B	4.86
C	0.85
P	1.84
Q1	1.40
Q2	1.40



## SS5U100PAQ

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