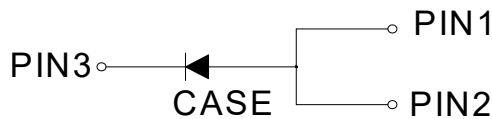
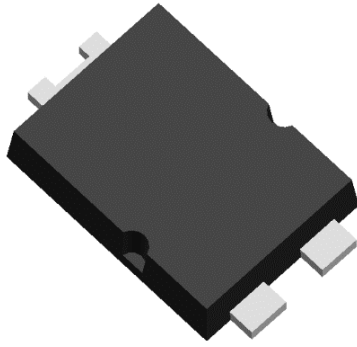


## Schottky Rectifier



### 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, inverters, converters, and freewheeling diodes for consumer, 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	SS15U45PQ
Device marking code			SS15U45P
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	45
Average Rectified Output Current @60Hz -sine wave, R- load, $T_c=107^\circ\text{C}$	$I_o$	A	15
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	$I_{FSM}$	A	300
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_j=25^\circ\text{C}$	$I^2t$	$\text{A}^2\text{s}$	375
Storage Temperature	$T_{stg}$	$^\circ\text{C}$	-55 ~+150
Junction Temperature	$T_j$	$^\circ\text{C}$	-55 ~+150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	$V_{FM}$	V	$I_{FM}=5\text{A}$ , $T_j=25^\circ\text{C}$	-	0.43	0.55
			$I_{FM}=15\text{A}$ , $T_j=25^\circ\text{C}$	-	0.54	0.8
Reverse Breakdown Voltage	$V_{BR}$	V	$I_R=0.5\text{mA}$	45	-	-
Leakage Current	$I_R$	mA	$V_R=45\text{V}$ , $T_j=25^\circ\text{C}$	-	-	0.1
			$V_R=45\text{V}$ , $T_j=100^\circ\text{C}$	-	-	50
Typical junction capacitance	$C_j$	pF	$V_R=4\text{V}$ , $f=1\text{MHz}$	-	700	-



# SS15U45PQ

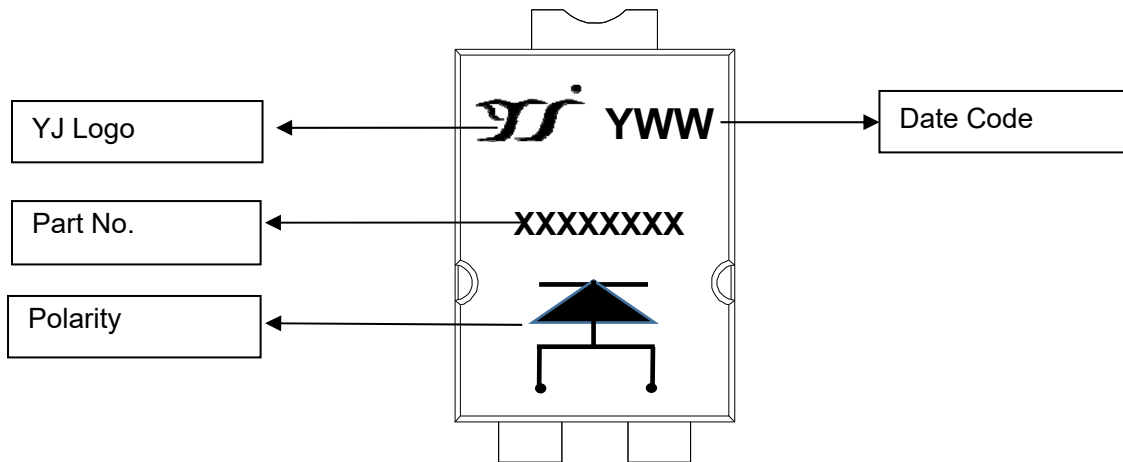
## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	SS15U45PQ
Thermal Resistance	Junction to Case	R <sub>θJ-A</sub>	°C/W	90
		R <sub>θJ-C</sub>	°C/W	8

## ■ Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS15U45PQ	F1	Approximate 0.106	5000	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 part no., like SS15U45P.
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:  $I_O$ - $T_C$  Curve

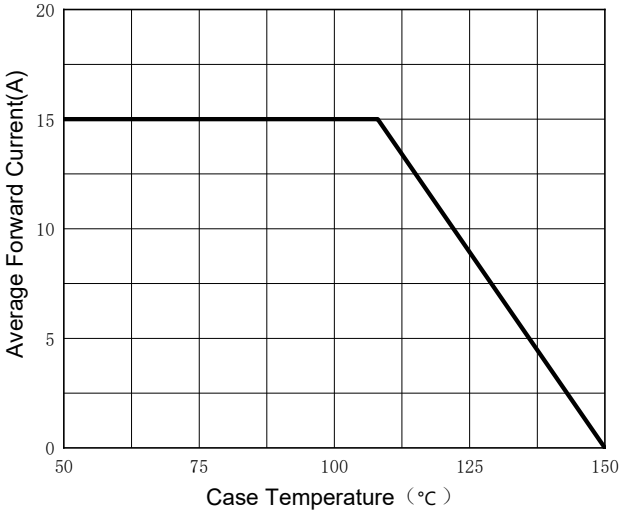


Fig.2: Forward Surge Current Capability

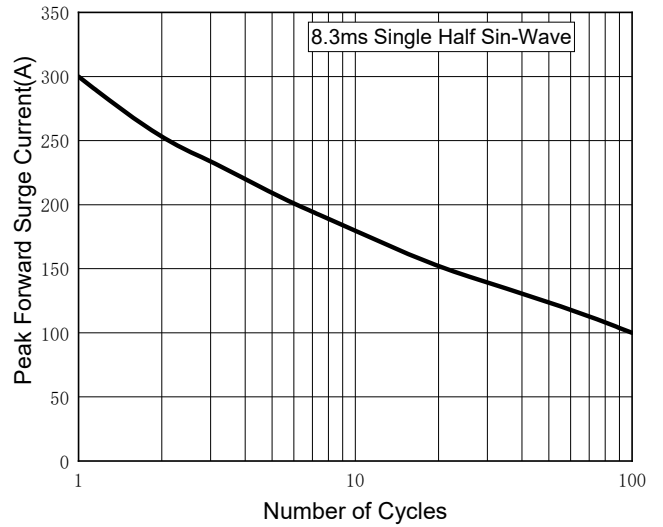


Fig.3: Typical Forward Characteristics

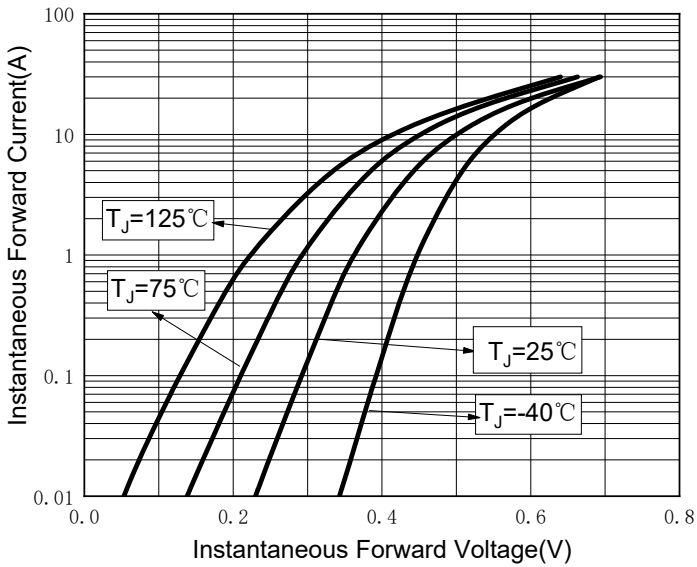


Fig.4: Typical Reverse Characteristics

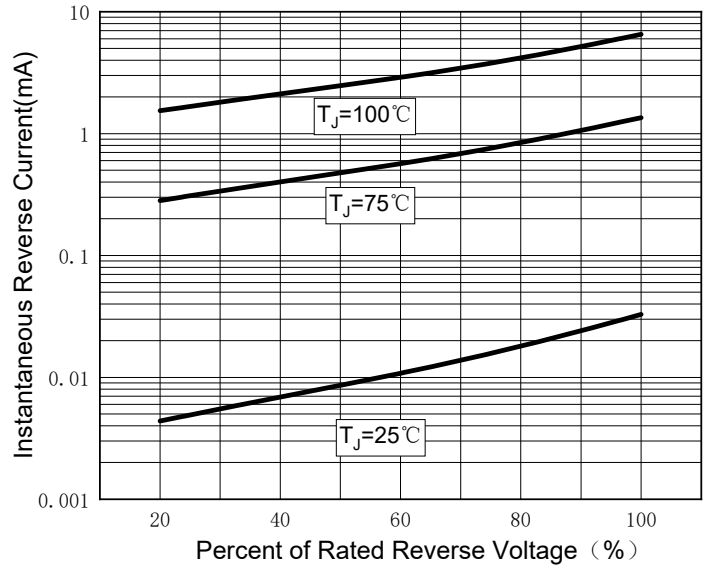
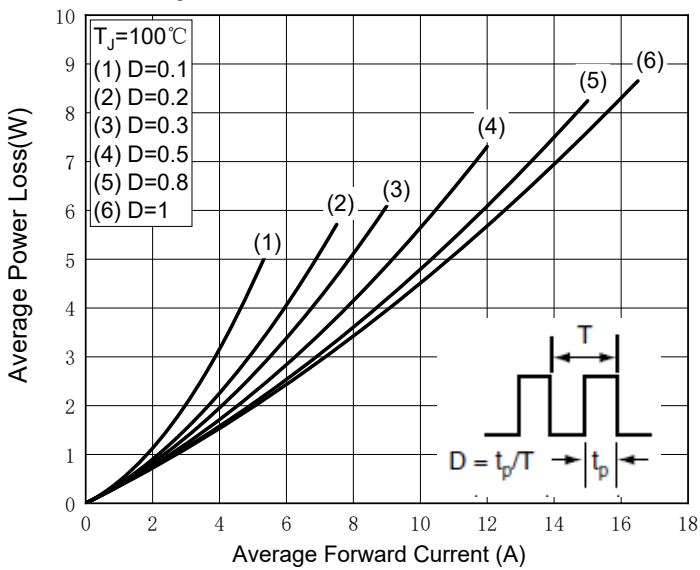


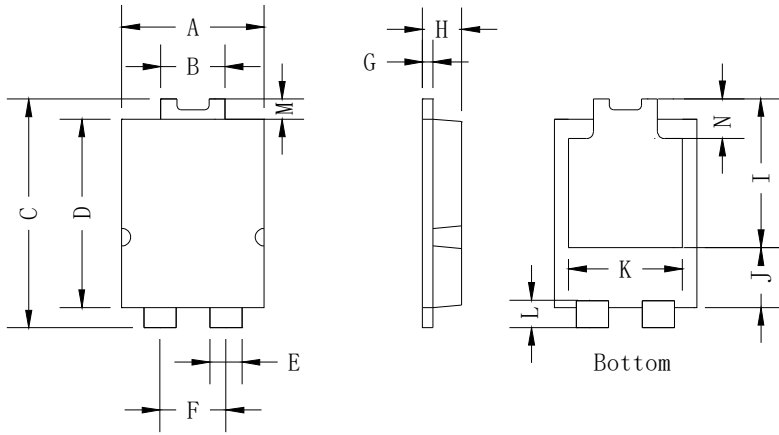
Fig.5: Forward Power Loss Characteristics





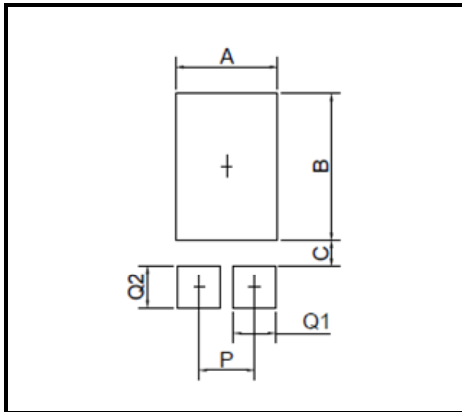
# SS15U45PQ

## ■ 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	0.55	0.75
M	0.50 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



## Disclaimer

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