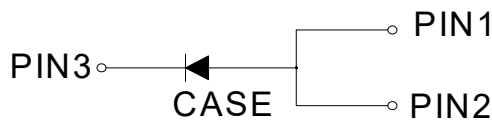
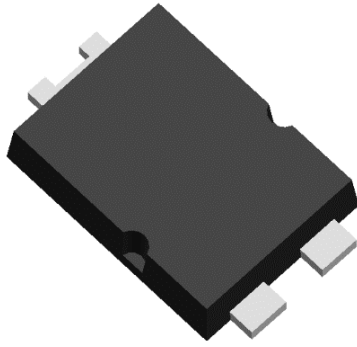


Schottky Rectifier



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	SS10U100PQ
Device marking code			SS10U100P
Repetitive Peak Reverse Voltage	V_{RRM}	V	100
Average Rectified Output Current @60Hz -sine wave	I_O	A	10
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 ² 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	$I_F=5\text{A}$	0.725	-	
			$I_F=10\text{A}$			$T_A=25^\circ\text{C}$
			$I_F=5\text{A}$	0.585	-	
			$I_F=10\text{A}$			$T_A=125^\circ\text{C}$
Typical junction capacitance	C_J	pF	$V_R=4\text{V}$, $f=1$ MHz	270	-	
Leakage Current	I_R	μA	$V_R=100\text{V}$	$T_A=25^\circ\text{C}$	0.3	10
		mA		$T_A=125^\circ\text{C}$	0.1	3



SS10U100PQ

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

PARAMETER	SYMBOL	UNIT	SS10U100PQ
Typical Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C/W}$	65
	$R_{\theta J-L}$	$^\circ\text{C/W}$	3

■ Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS10U100PQ	F1	Approximate 0.0821	5000	80000	13" reel

■ Characteristics (Typical)

Fig.1:Maximum Forward Current Derating Curve

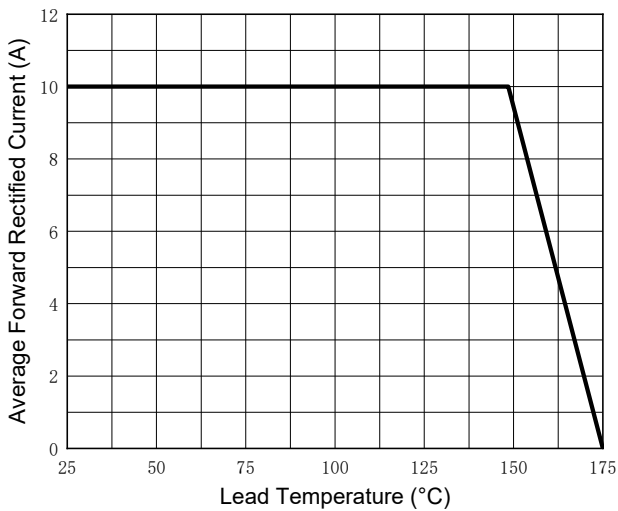


Fig.2:Forward Surge Current Capability

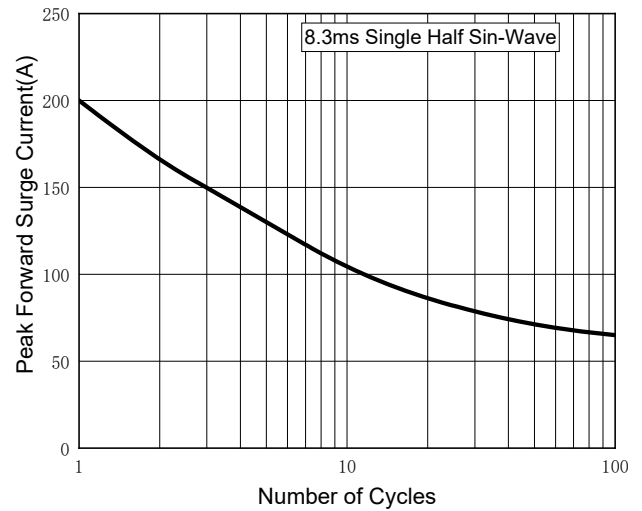


Fig.3:Typical Instantaneous Forward Characteristics

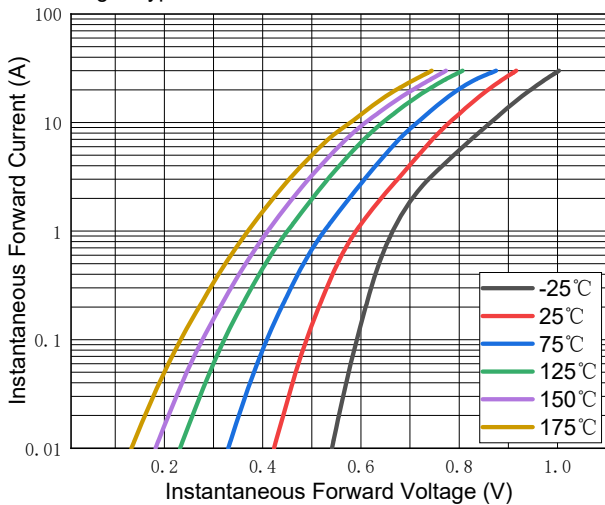
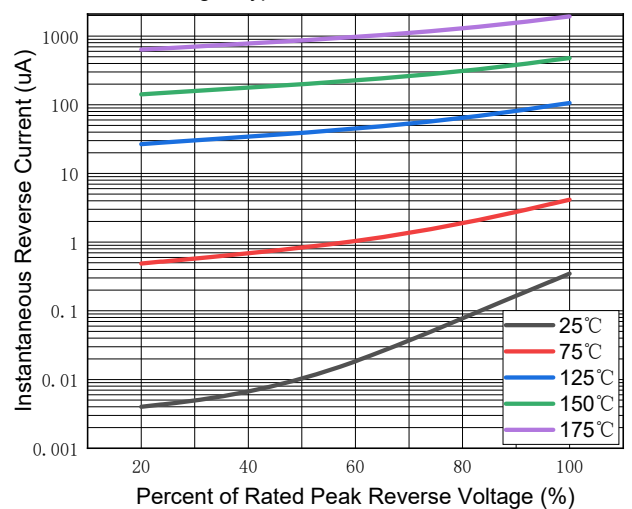


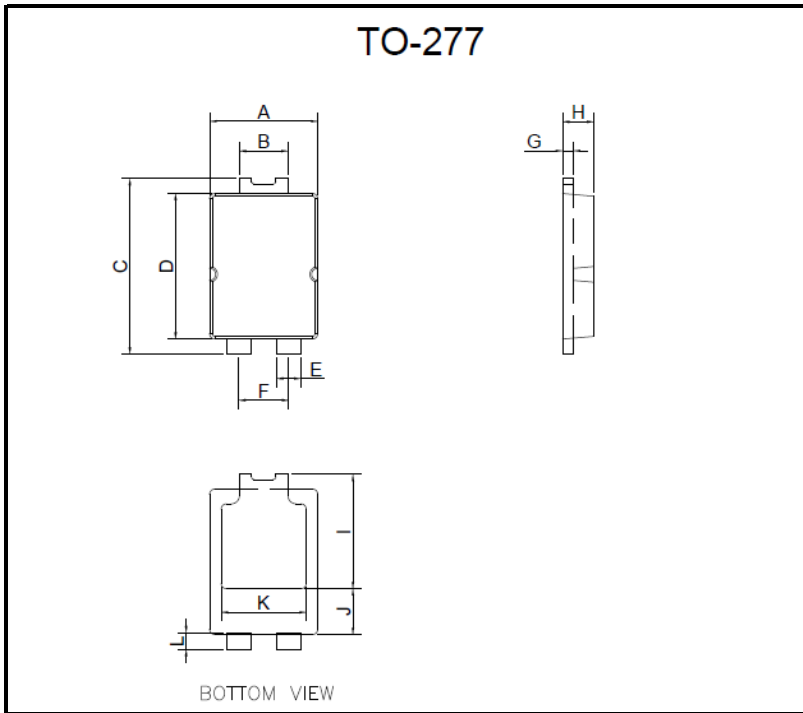
Fig.4:Typical Reverse Characteristics





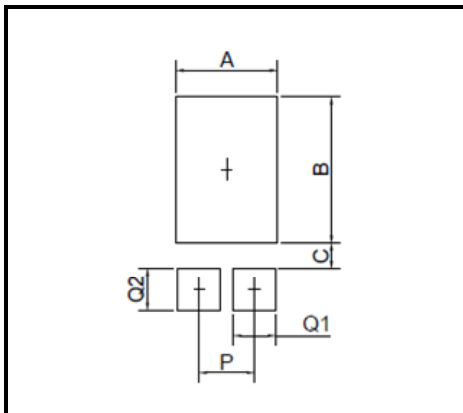
SS10U100PQ

■ 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

■ Suggested pad layout



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



SS10U100PQ

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