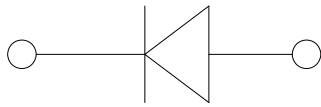
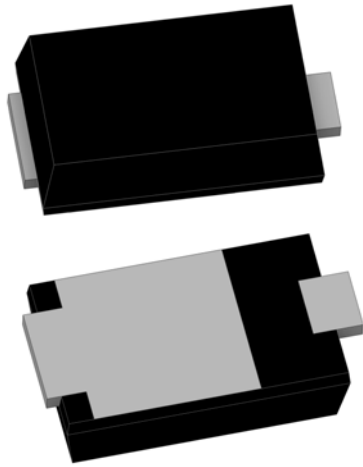


## Surface Mount Schottky Rectifier



### Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix "Q" means AEC-Q101 qualified

### Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, automotive and polarity protection applications.

### Mechanical Data

- **Package:** SOD-123HE  
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
- **Polarity:** Cathode line denotes the cathode end

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

PARAMETER	SYMBOL	UNIT	S28EQ	S210EQ
Device marking code			S28E	S210E
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	80	100
Maximum RMS voltage	V <sub>RMS</sub>	V	56	70
Maximum DC blocking voltage	V <sub>DC</sub>	V	80	100
Maximum average forward rectified current at T <sub>L</sub> =115°C(Fig.1)	I <sub>F(AV)</sub>	A	2.0	
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T <sub>J</sub> =25°C	I <sub>FSM</sub>	A	50	
Voltage rate of change (rated V <sub>R</sub> )	dV/dt	V/μs	10000	
Storage temperature	T <sub>stg</sub>	°C	-55 ~+175	
Junction temperature	T <sub>J</sub>	°C	-55 ~+175	

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

PARAMETER	SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT	
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =2A	T <sub>A</sub> =25°C	0.77	0.8	V
			T <sub>A</sub> =125°C	0.63	0.7	
Reverse current	I <sub>R</sub>	Rated V <sub>R</sub>	T <sub>A</sub> =25°C	-	1	μA
			T <sub>A</sub> =125°C	20	150	
Typical junction capacitance	C <sub>J</sub>	V <sub>R</sub> =4V,f=1MHz	60	-	pF	



# S28EQ THRU S210EQ

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

PARAMETER	SYMBOL	UNIT	S28EQ	S210EQ
Typical Thermal Resistance	R <sub>θJ-A</sub>	°C/W	98	
	R <sub>θJ-l</sub>	°C/W	30	
	R <sub>θJ-c</sub>	°C/W	15	

Note:  
 (1) Thermal resistance from junction to ambient and from junction to lead and from junction to case mounted on P.C.B. with 5 mm x 5 mm copper pad areas.

## ■ Characteristics (Typical)

Fig.1: Forward Current Derating Curve

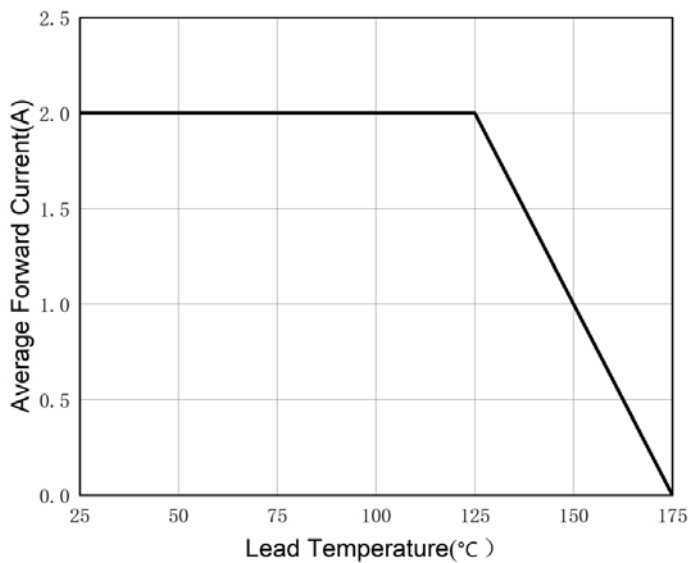


Fig.2: Maximum Non-Repetitive Peak Forward Surge Current

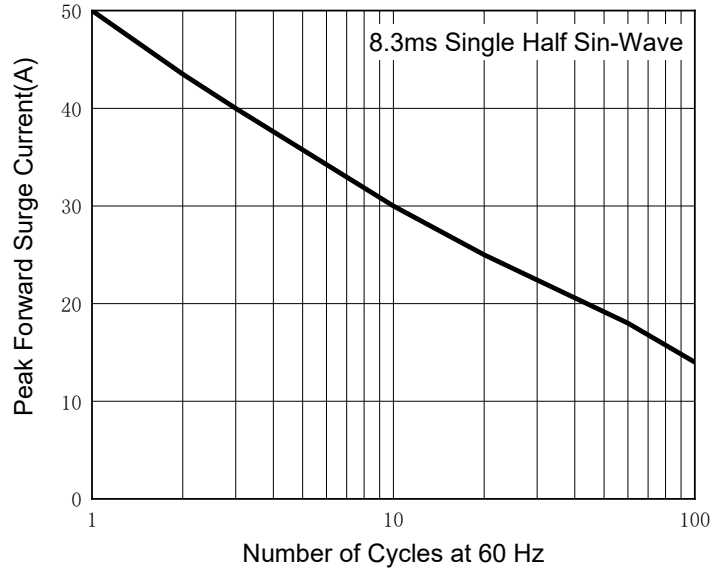


Fig.3: Typical Instantaneous Forward Characteristics

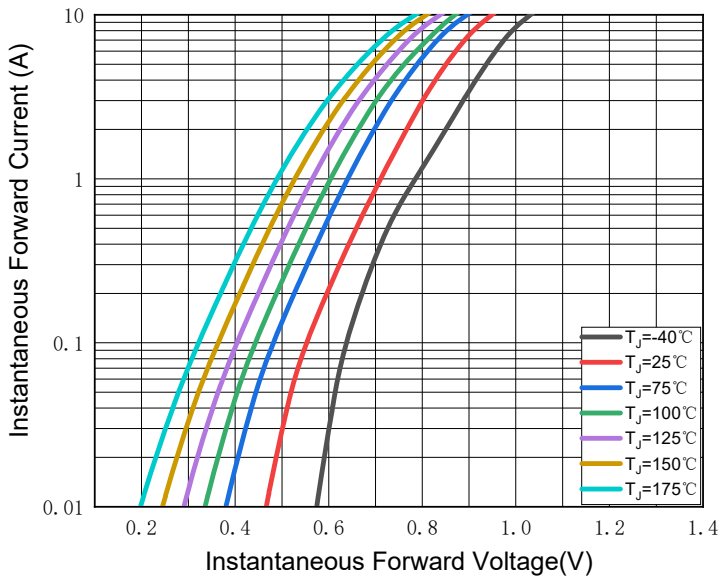
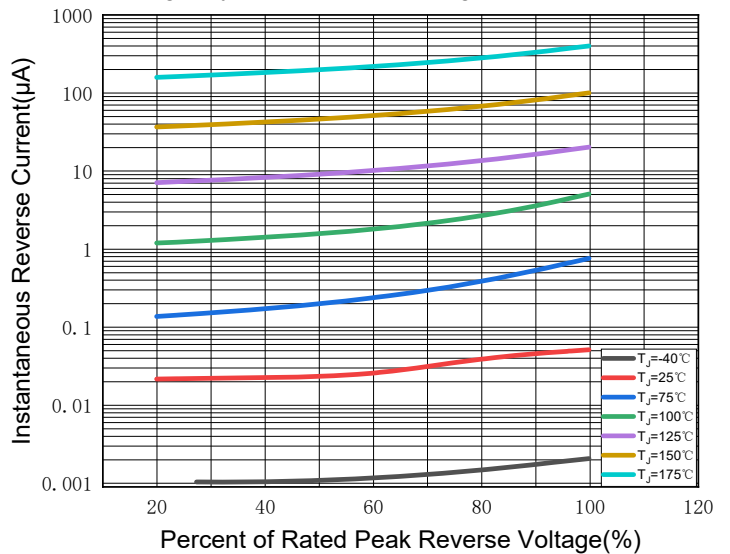


Fig.4: Typical Reverse Leakage Characteristics



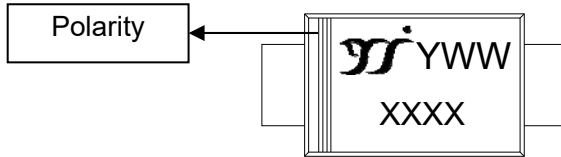


# S28EQ THRU S210EQ

## Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S28EQ THRU S210EQ	F1	Approximate 0.024	3000	120000	7" reel

## Marking Information



Note:

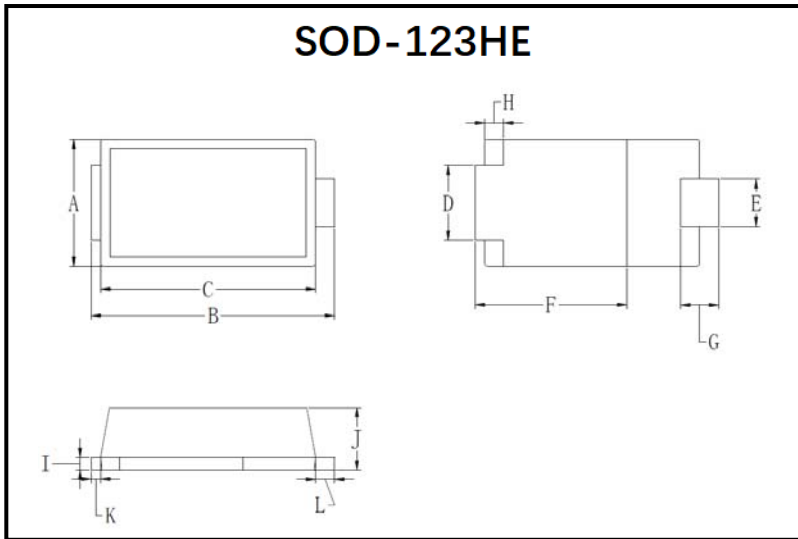
1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXX is marking code, like S210EQ marking code is S210E
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

The 17<sup>th</sup> week of 2022, date code is 217

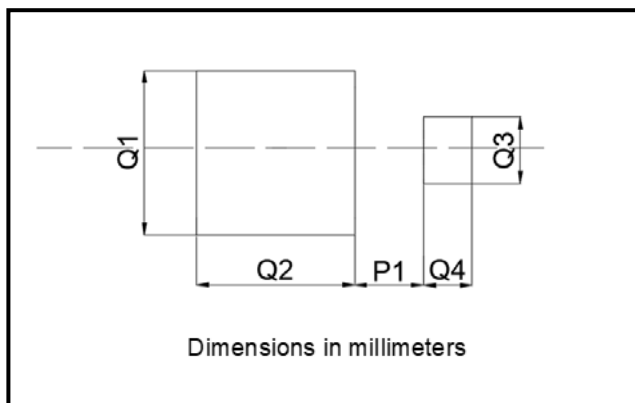
The 17<sup>th</sup> week of 2023, date code is 317

## Outline Dimensions



SOD-123HE		
Dim	Min	Max
A	1.88	2.18
B	3.70	4.00
C	3.19	3.61
D	1.05	1.35
E	0.61	0.91
F	2.20	2.90
G	0.40	0.80
H	0.30 TYP	
I	0.10	0.30
J	0.85	1.15
K	0.00	0.30
L	0.15	0.45

## Suggested pad layout



SOD-123HE	
Dim	Millimeters
P1	0.64
Q1	2.54
Q2	2.67
Q3	1.27
Q4	0.76



## S28EQ THRU S210EQ

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### Disclaimer

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