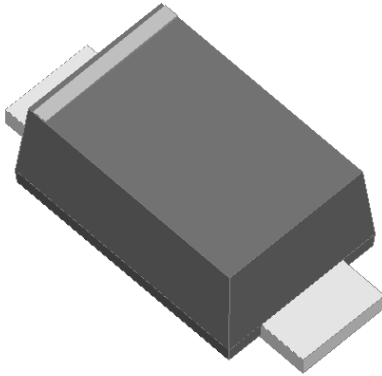


Surface Mount Schottky Rectifier

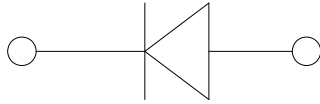


Features

- 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-123FL
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_A=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S28Q	S210Q
Device marking code			S28	S210
Repetitive peak reverse voltage	V _{RRM}	V	80	100
Maximum RMS voltage	V _{RMS}	V	56	70
Maximum DC blocking voltage	V _{DC}	V	80	100
Maximum average forward rectified current at T _L =115°C (Fig.1)	I _{F(AV)}	A	2.0	
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T _J =25°C	I _{FSM}	A	50	
Voltage rate of change (rated V _R)	dV/dt	V/μs	10000	
Storage temperature	T _{stg}	°C	-55 ~+175	
Junction temperature	T _J	°C	-55 ~+175	

■Electrical Characteristics (T_A=25°C Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS		TYP	MAX	UNIT
Instantaneous forward voltage	V _F	I _F =2A	T _A =25°C	0.77	0.8	V
			T _A =125°C	0.63	0.7	
Reverse current	I _R	Rated V _R	T _A =25°C	-	1	μA
			T _A =125°C	20	150	
Typical junction capacitance	C _J	V _R =4V,f=1MHz		60	-	pF



S28Q THRU S210Q

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

PARAMETER	SYMBOL	UNIT	TYP	MAX
Thermal Resistance	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	85 ⁽¹⁾	105 ⁽¹⁾
	$R_{\theta J-L}$		35 ⁽¹⁾	45 ⁽¹⁾
	$R_{\theta J-SP}$		17 ⁽²⁾	20 ⁽²⁾

Note:

- (1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.
- (2) Thermal resistance between junction and cathode tab solder point.

■ Characteristics (Typical)

Fig.1:Forward Current Derating Curve

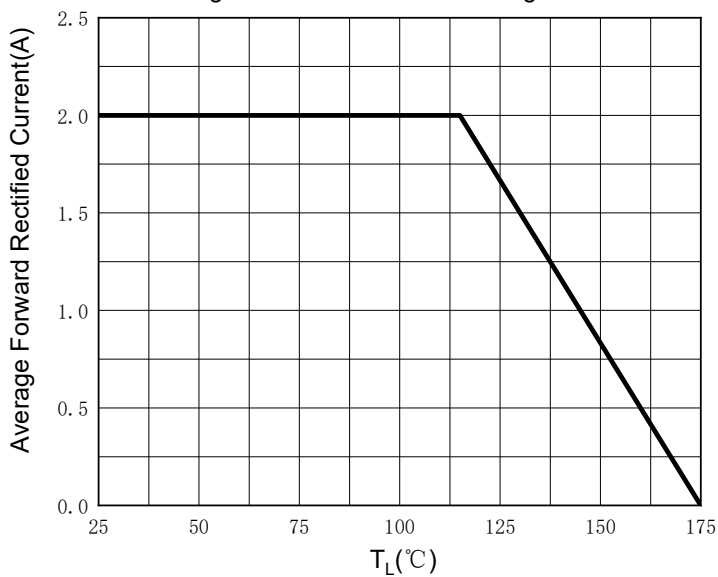


Fig.2:Maximum Non-Repetitive Peak Forward Surge Current

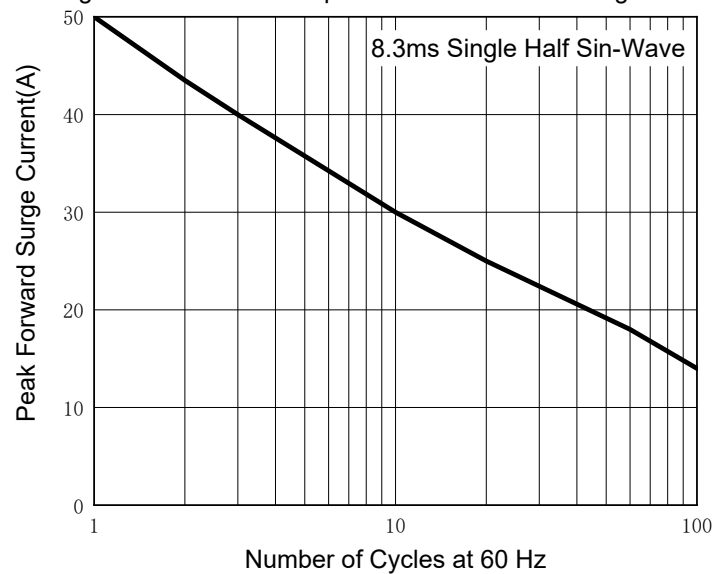


Fig.3:Typical Instantaneous Forward Characteristics

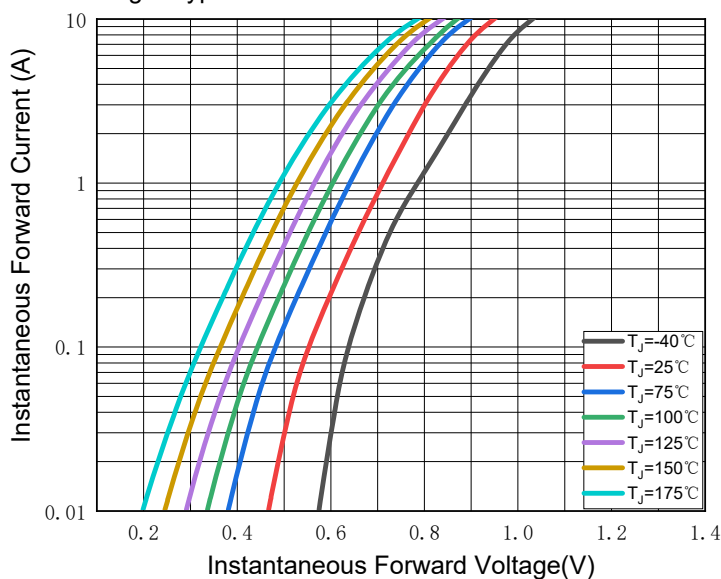
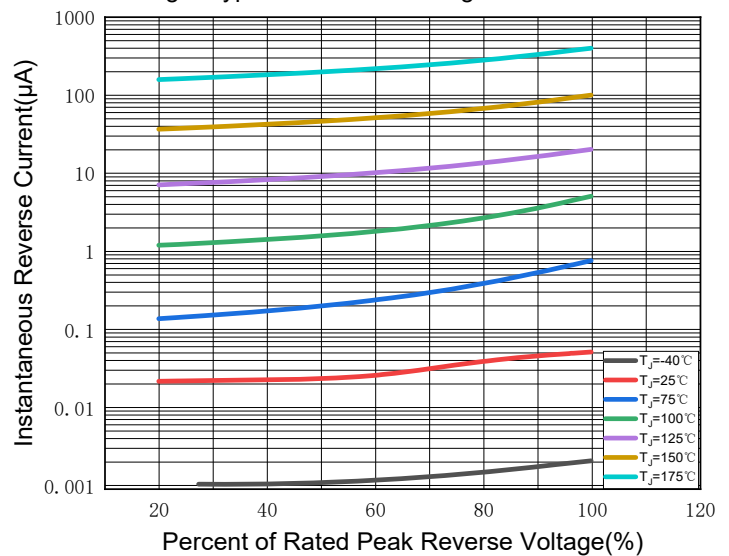


Fig.4:Typical Reverse Leakage Characteristics



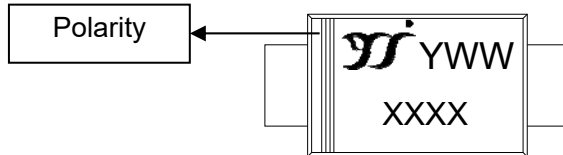


S28Q THRU S210Q

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S28Q THRU S210Q	F1	Approximate 0.0169	3000	120000	7" reel

■ Marking Information



Note:

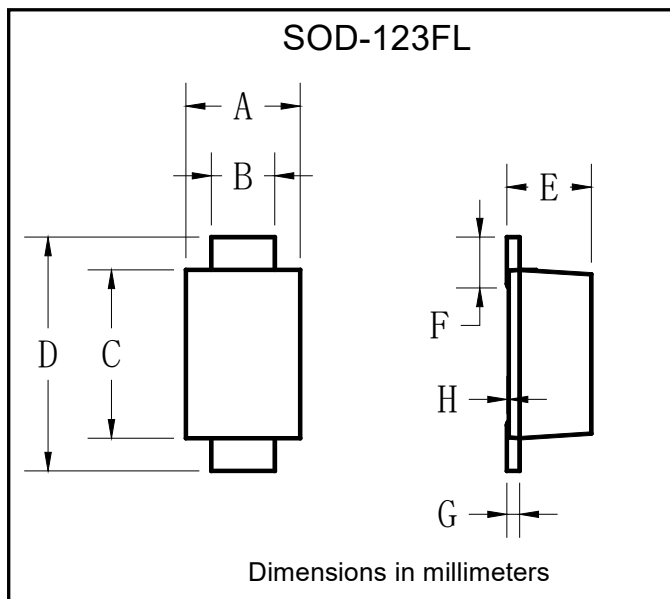
1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXX is marking code, like S210Q marking code is S210
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

The 17th week of 2022, date code is 217

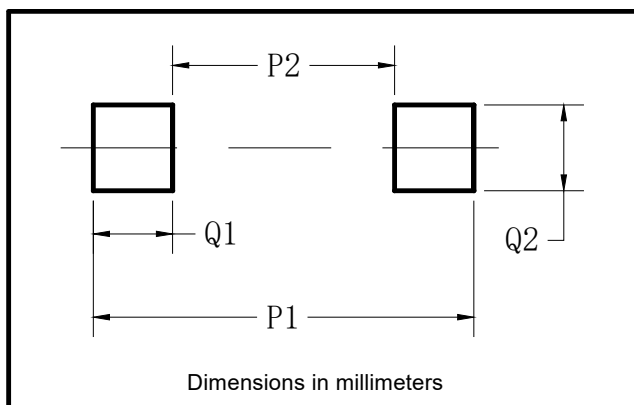
The 17th week of 2023, date code is 317

■ Outline Dimensions



SOD-123FL		
Dim	Min	Max
A	1.60	1.90
B	0.90	1.10
C	2.55	2.85
D	3.60	3.90
E	1.00	1.20
F	0.40	0.90
G	0.10	0.25
H	0	0.05

■ Suggested pad layout



SOD-123FL	
Dim	Millimeters
P1	3.90
P2	1.90
Q1	1.00
Q2	1.50



S28Q THRU S210Q

Disclaimer

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