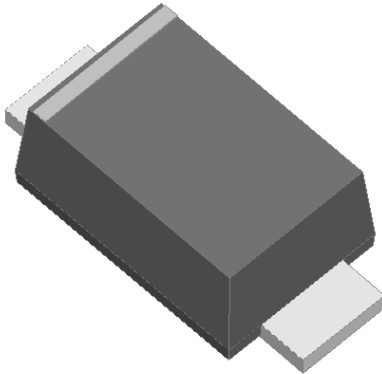


## Surface Mount Schottky Rectifier

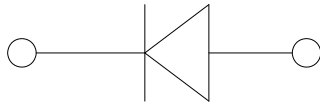


### Features

- 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 Date

- **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<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S22Q	S23Q	S24Q	S25Q	S26Q	S28Q	S210Q	S215Q	S220Q
Device marking code			S22	S23	S24	S25	S26	S28	S210	S215	S220
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, Resistance load, T <sub>a</sub> (FIG.1)	I <sub>O</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								
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150								
Junction temperature	T <sub>J</sub>	°C	-55 ~+125				-55 ~+150				

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	S22Q	S23Q	S24Q	S25Q	S26Q	S28Q	S210Q	S15Q	S220Q
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =2.0A	0.5			0.7		0.85		0.9	
Maximum DC reverse current at rated DC blocking voltage per diode @ V <sub>RM</sub> =V <sub>RRM</sub>	I <sub>RRM</sub>	mA	T <sub>a</sub> =25°C	0.50					0.10			
			T <sub>a</sub> =100°C	10					5			



# S22Q THRU S220Q

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

PARAMETER	SYMBOL	UNIT	S22Q	S23Q	S24Q	S25Q	S26Q	S28Q	S210Q	S215Q	S220Q
Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C/W}$	70 <sup>1)</sup>								
	$R_{\theta J-L}$		20 <sup>1)</sup>								

Note:  
 (1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm\*3mm copper pad areas.

## ■ Characteristics (Typical)

FIG1:  $I_o-T_L$  Curve

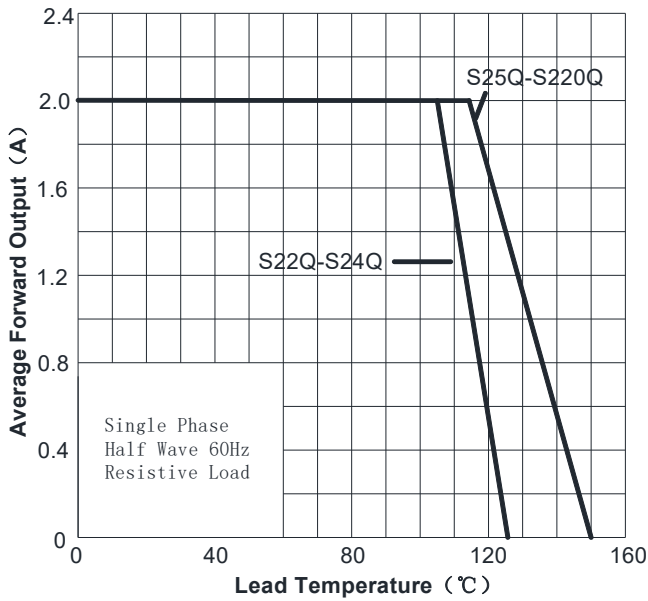


FIG2: Surge Forward Current Capability

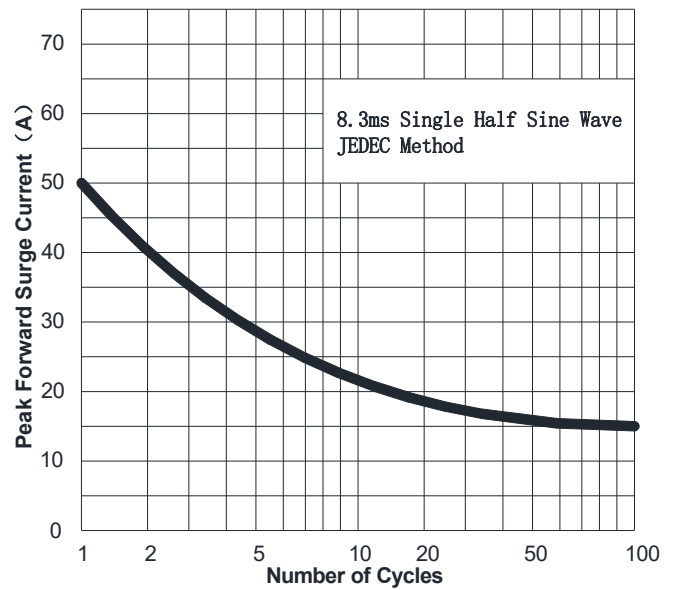


FIG3: Forward Voltage

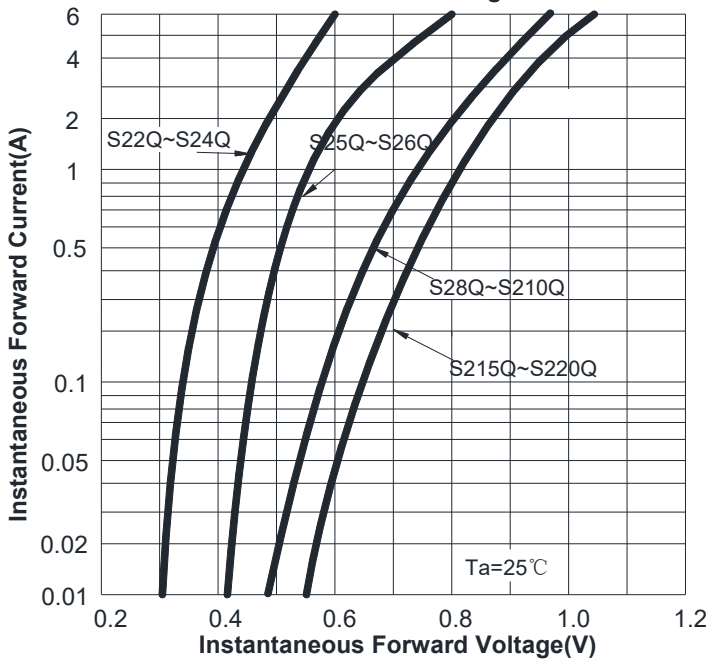
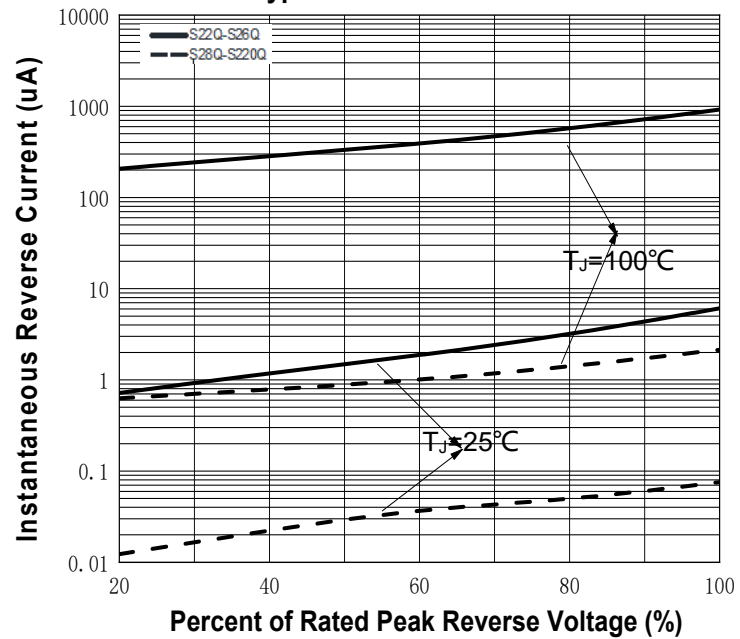


FIG4: Typical Reverse Characteristics



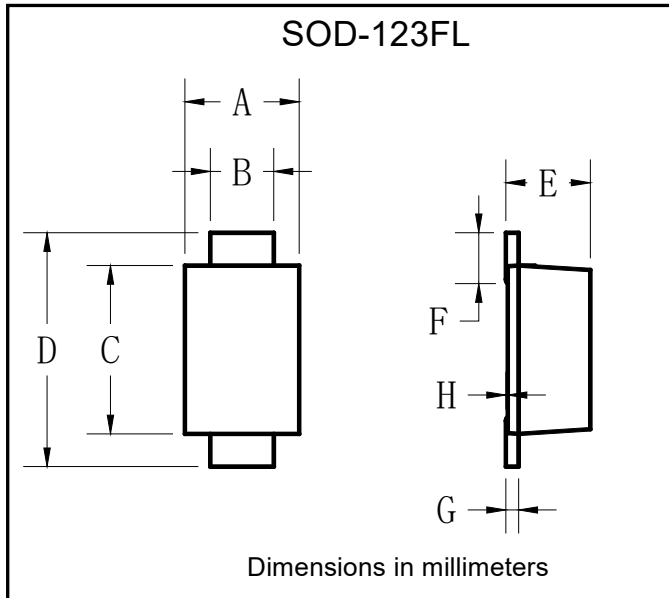


## S22Q THRU S220Q

### ■ Ordering Information (Example)

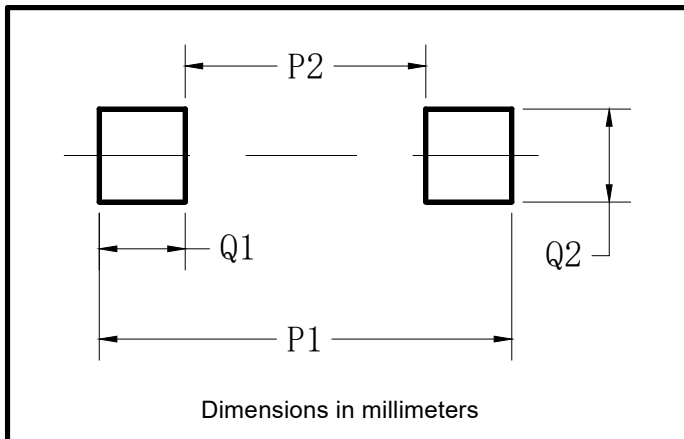
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S22Q THRU S220Q	F1	Approximate 0.0169	3000	15000	120000	7" reel

### ■ 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	0.02	0.05

### ■ Suggested pad layout



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



## S22Q THRU S220Q

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