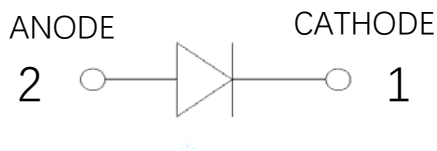
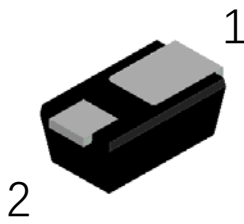
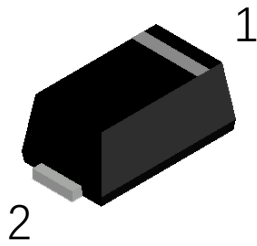


## Surface Mount Schottky Rectifier



### 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-323HE  
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>j</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FM14EQ
Device marking code			14
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	40
Maximum RMS voltage	V <sub>RMS</sub>	V	28
Maximum DC blocking voltage	V <sub>DC</sub>	V	40
Maximum average forward rectified current at T <sub>L</sub> (Fig.1)	I <sub>F(AV)</sub>	A	1.0
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, T <sub>j</sub> =25°C	I <sub>FSM</sub>	A	30
Voltage rate of change (rated V <sub>R</sub> )	dV/dt	V/μs	10000
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150
Junction temperature	T <sub>j</sub>	°C	-55 ~+150

### ■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> =1A	T <sub>j</sub> =25°C	0.5	V
			T <sub>j</sub> =125°C	-	
Reverse current	I <sub>R</sub>	Rated V <sub>R</sub>	T <sub>j</sub> =25°C	2	μA
			T <sub>j</sub> =125°C	-	10 mA
Typical junction capacitance	C <sub>J</sub>	V <sub>R</sub> =4V, f=1MHz	55	-	pF



## FM14EQ

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

PARAMETER	SYMBOL	UNIT	FM14EQ
Thermal resistance	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	260 <sup>(1)</sup>
	$R_{\theta J-L}$		65 <sup>(1)</sup>
	$R_{\theta J-SP}$		30 <sup>(3)</sup>
			10 <sup>(2)</sup>

Note:

- (1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B without copper pad areas.
- (2) Thermal resistance between junction and cathode tab solder point.
- (3) Thermal resistance between junction and lead mounted on P.C.B with 6mm\*6mm copper pad areas.

### ■ Characteristics(Typical)

Fig.1:Forward Current Derating Curve

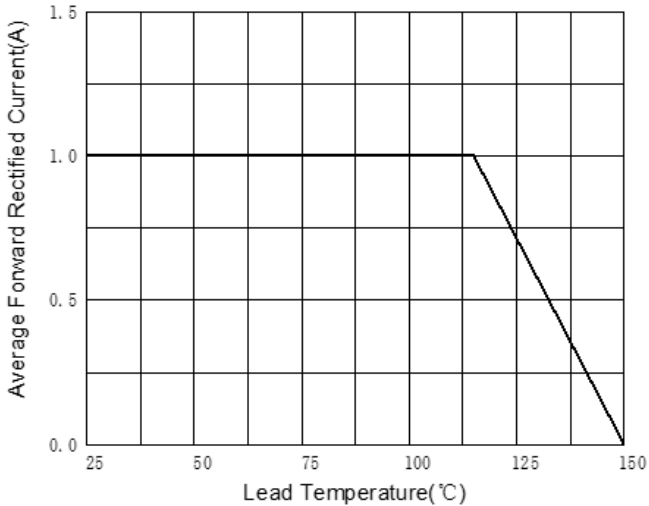


Fig.2:Maximum Non-Repetitive Peak Forward Surge Current

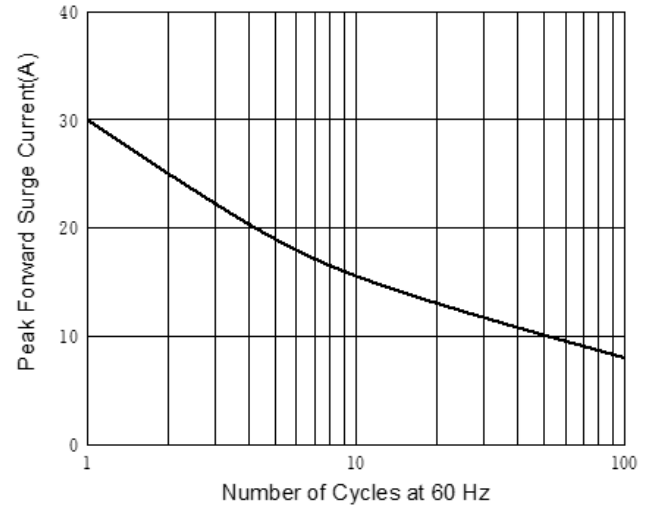


Fig.3:Typical Instantaneous Forward Characteristics

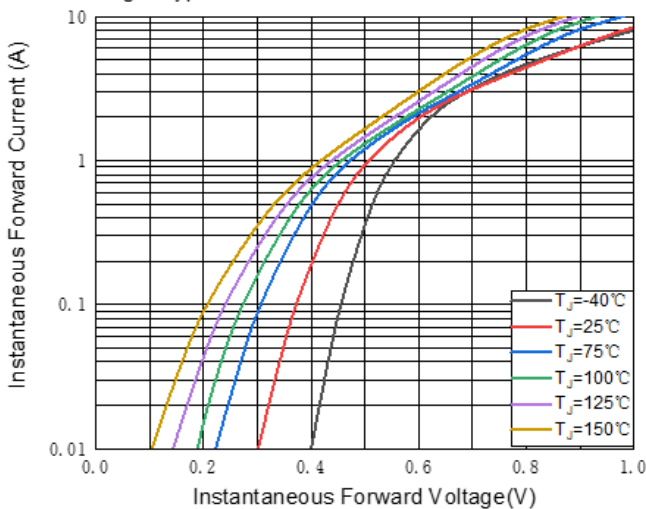


Fig.4:Typical Reverse Leakage Characteristics

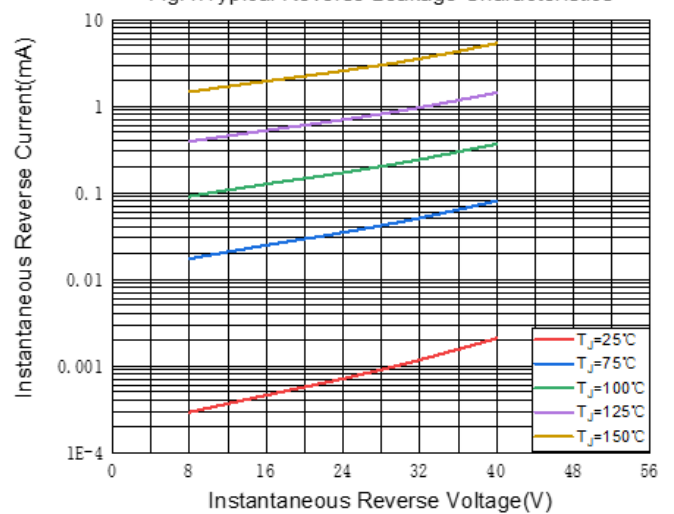
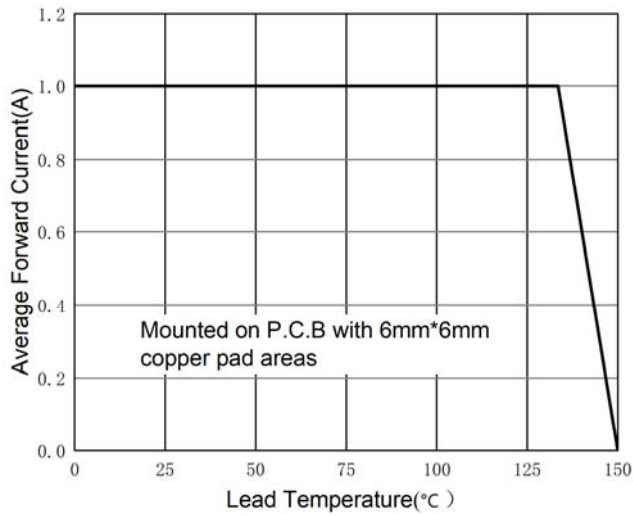


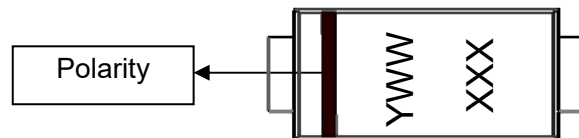
Fig.5:Forward Current Derating Curve



## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FM14EQ	F1	Approximate 0.008	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 FM14EQ marking code is 14
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

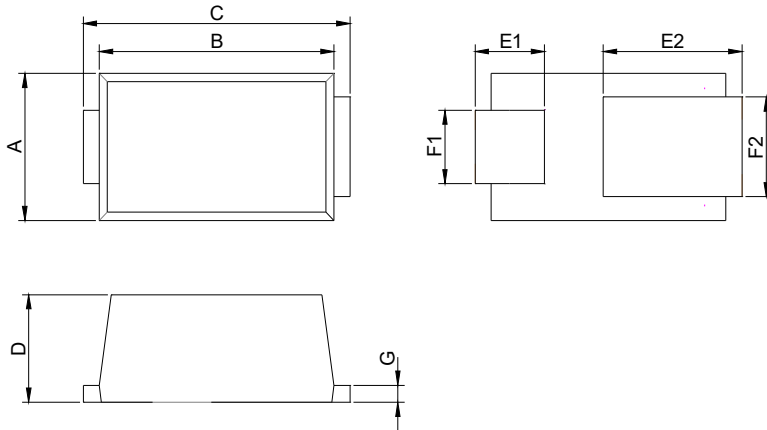
The 17<sup>th</sup> week of 2022, date code is 217

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



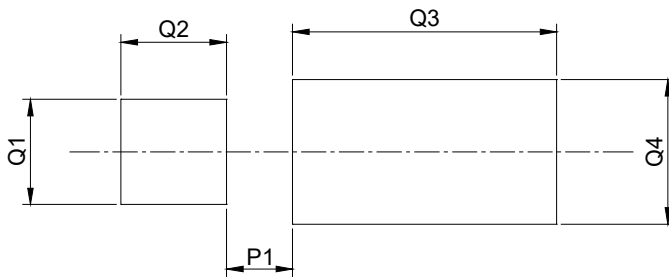
## FM14EQ

### ■ Outline Dimensions



SOD-323HE		
Dim	Millimeters	
	Min	Max
A	1.20	1.40
B	2.10	2.30
C	2.30	2.70
D	0.90	1.00
E1	0.55	0.75
E2	1.10	1.50
F1	0.55	0.75
F2	0.78	0.98
G	0.12	0.27

### ■ Suggested pad layout



SOD-323HE	
Dim	Millimeters
P1	0.50
Q1	0.80
Q2	0.80
Q3	2.00
Q4	1.10



### Disclaimer

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