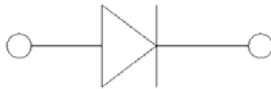
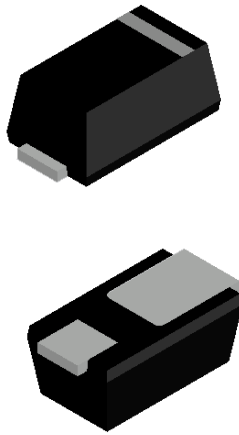


Surface Mount Schottky Rectifier



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-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 ($T_j=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FM16EQ
Device marking code			16
Repetitive peak reverse voltage	V_{RRM}	V	60
Maximum RMS voltage	V_{RMS}	V	42
Maximum DC blocking voltage	V_{DC}	V	60
Maximum average forward rectified current at T_L (Fig.1)	$I_{F(AV)}$	A	1.0
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, $T_J=25^\circ\text{C}$	I_{FSM}	A	30
Voltage rate of change (rated V_R)	dV/dt	V/ μs	10000
Storage temperature	T_{stg}	$^\circ\text{C}$	-55 ~+150
Junction temperature	T_J	$^\circ\text{C}$	-55 ~+150

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

PARAMETER	SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT	
Instantaneous forward voltage	V_F	$I_F=1\text{A}$	$T_J=25^\circ\text{C}$	0.6	0.7	V
			$T_J=125^\circ\text{C}$	-	0.55	
Reverse current	I_R	Rated V_R	$T_J=25^\circ\text{C}$	-	50	μA
			$T_J=125^\circ\text{C}$	-	10	mA
Typical junction capacitance	C_J	$V_R=4\text{V}, f=1\text{MHz}$	45	-	pF	



FM16EQ

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

PARAMETER	SYMBOL	UNIT	FM16EQ
Thermal resistance	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	260 ⁽¹⁾
	$R_{\theta J-L}$		70 ⁽¹⁾
	$R_{\theta J-SP}$		10 ⁽²⁾

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.

■ Characteristics(Typical)

Fig.1:Forward Current Derating Curve

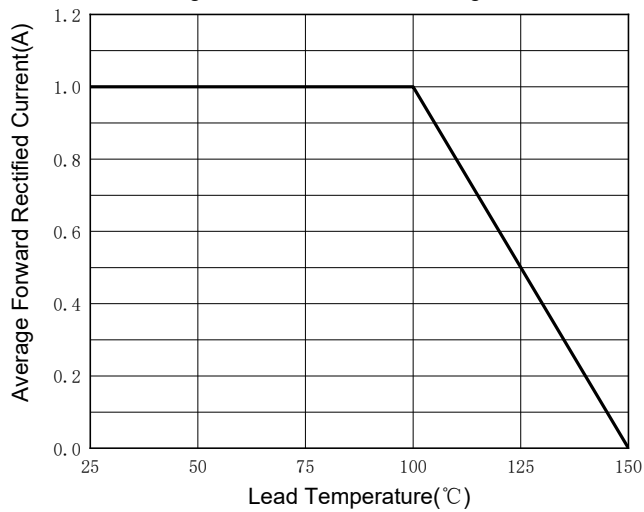


Fig.2:Maximum Non-Repetitive Peak Forward Surge Current

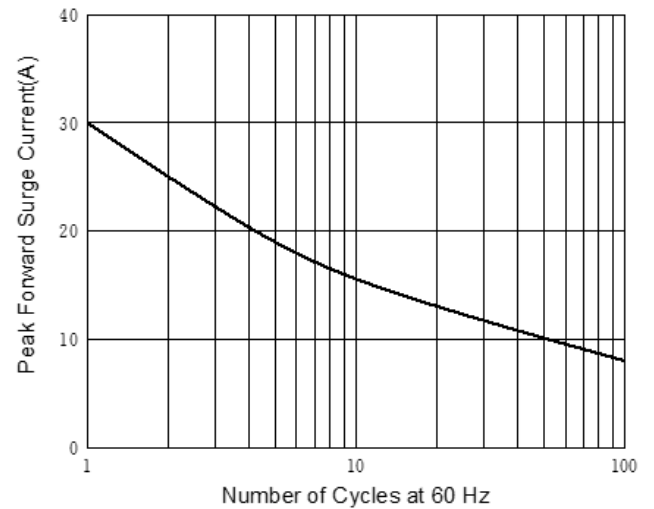


Fig.3:Typical Instantaneous Forward Characteristics

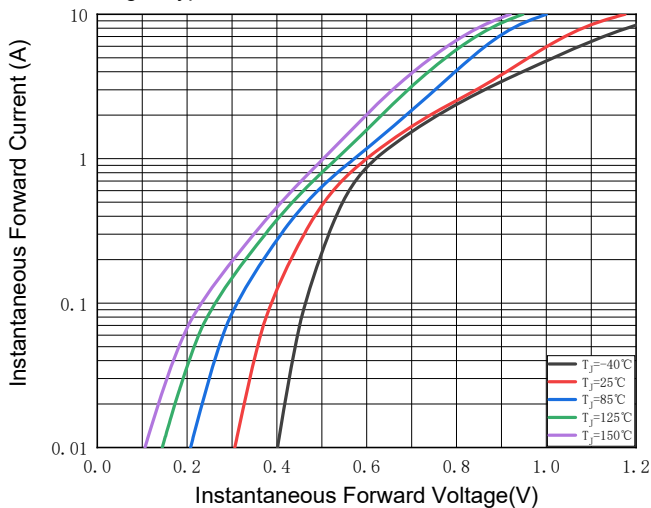
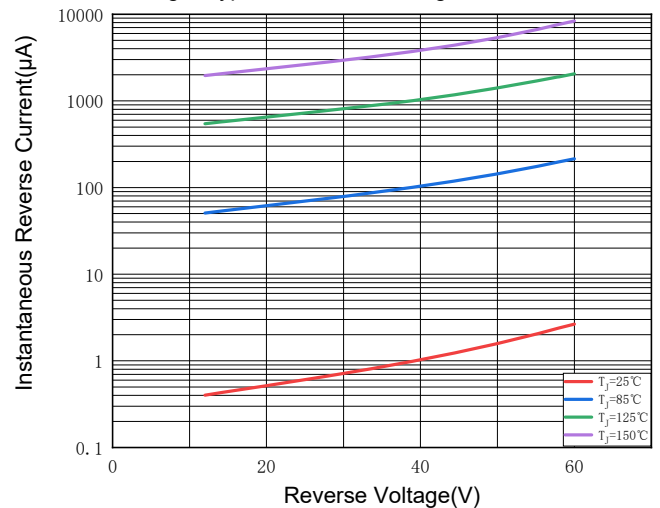


Fig.4:Typical Reverse Leakage Characteristics



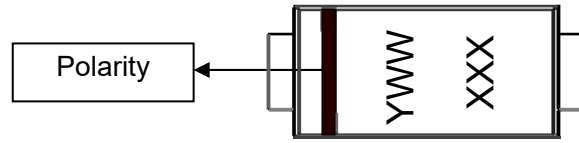
■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FM16EQ	F1	Approximate 0.008	3000	120000	7" reel



FM16EQ

■ Marking Information



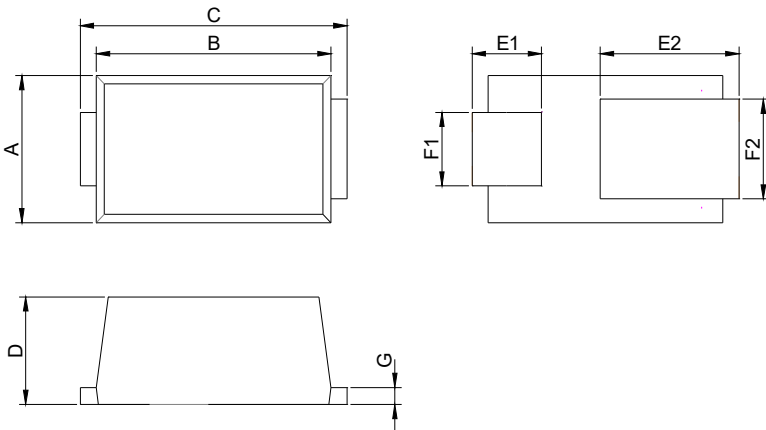
Note:

1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXX is marking code, like FM16EQ marking code is 16
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

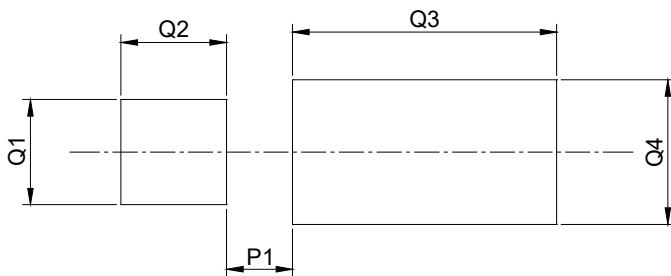
The 17th week of 2022, date code is 217
 The 17th week of 2023, date code is 317

■ Outline Dimensions



SOD-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



FM16EQ

Disclaimer

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