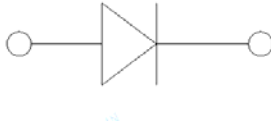
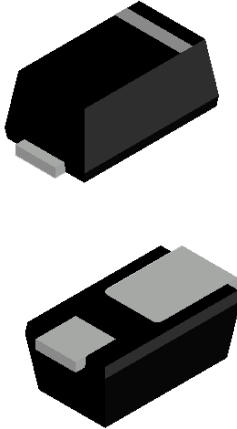


Surface Mount Schottky Rectifier



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

PARAMETER	SYMBOL	UNIT	FM12EQ
Device marking code			12
Repetitive peak reverse voltage	V_{RRM}	V	20
Maximum RMS voltage	V_{RMS}	V	14
Maximum DC blocking voltage	V_{DC}	V	20
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	$I_F=1\text{A}$	$T_j=25^\circ\text{C}$	0.42	0.47	V
			$T_j=125^\circ\text{C}$	-	0.36	
Reverse current	I_R	Rated V_R	$T_j=25^\circ\text{C}$	-	50	μA
			$T_j=125^\circ\text{C}$	-	20	mA
Typical junction capacitance	C_j	$V_R=4\text{V}, f=1\text{MHz}$	75	-	pF	



FM12EQ

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

PARAMETER	SYMBOL	UNIT	FM12EQ
Thermal resistance	$R_{\theta J-A}$	$^\circ\text{C/W}$	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

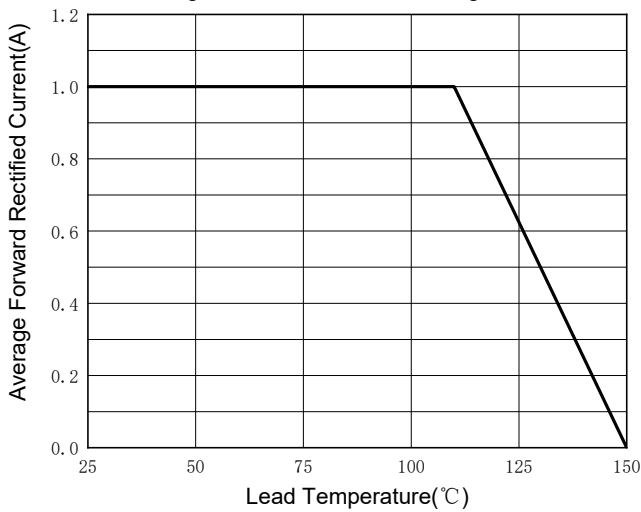


Fig.2:Maximum Non-Repetitive Peak Forward Surge Current

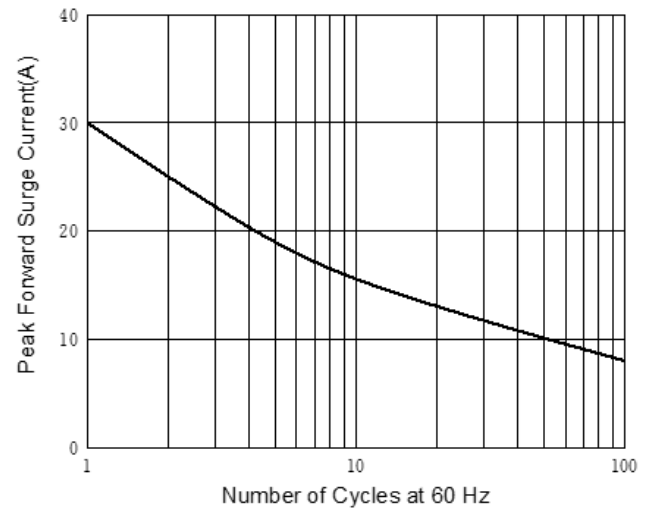


Fig.3:Typical Instantaneous Forward Characteristics

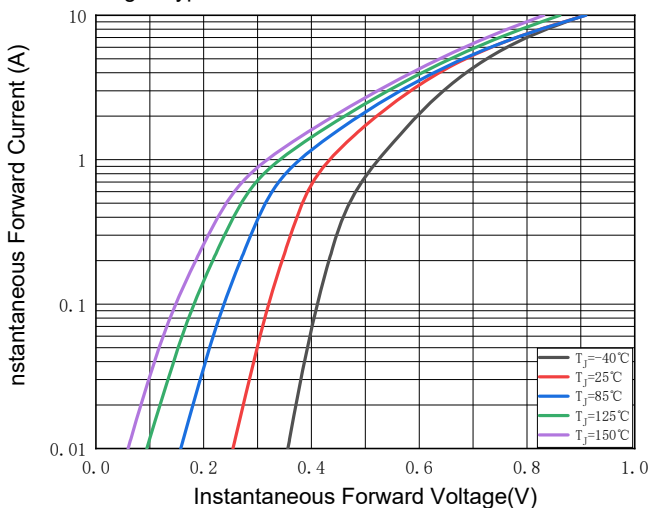
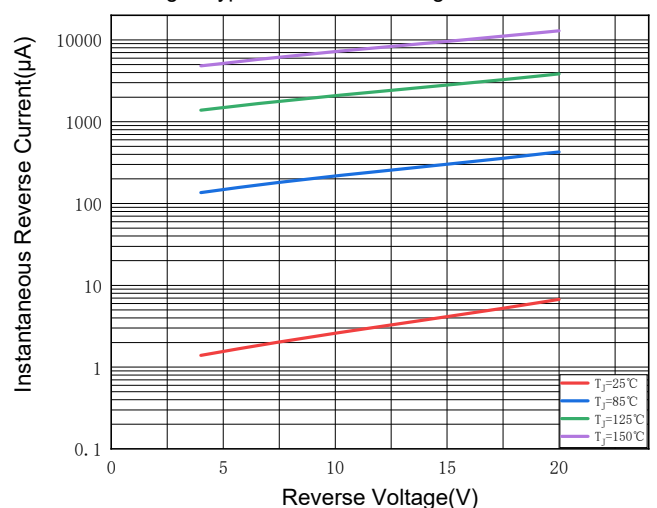


Fig.4:Typical Reverse Leakage Characteristics



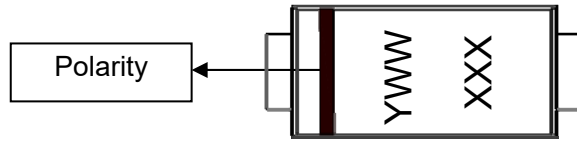
■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FM12EQ	F1	Approximate 0.008	3000	120000	7" reel



FM12EQ

■ Marking Information



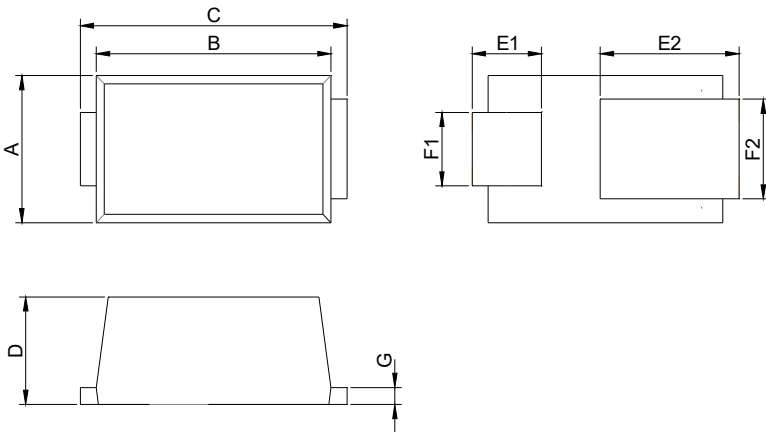
Note:

1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXX is marking code, like FM12EQ marking code is 12
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

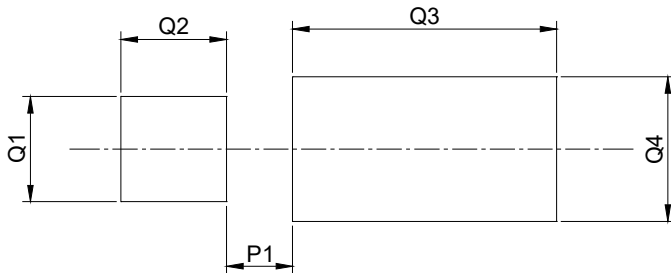
The 17th week of 2022, date code is 217
 The 17th week of 2023, date code is 317

■ 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



FM12EQ

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, lifesaving, lifesustaining, or military, Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.