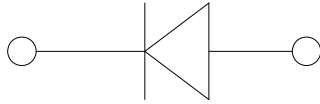
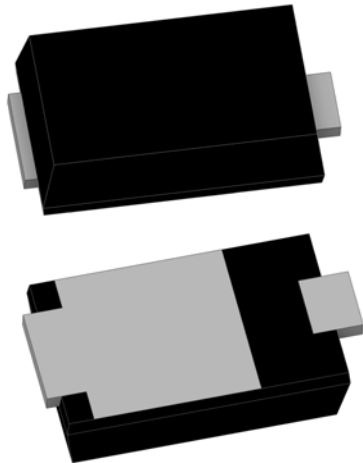


Surface Mount Schottky Rectifier



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-123HE
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	S16EQ
Device marking code			S16E
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 _O	A	1.0
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, T _J =25°C	I _{FSM}	A	40
Voltage rate of change (rated V _R)	dV/dt	V/μs	10000
Storage temperature	T _{stg}	°C	-55 ~+150
Junction temperature	T _J	°C	-55 ~+150

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

PARAMETER	SYMBOL	TEST CONDITIONS		TYP	MAX	UNIT
Instantaneous forward voltage	V _F	I _F =1A	T _J =25°C	0.5	0.7	V
			T _J =125°C	0.45	0.55	
Reverse current	I _R	Rated V _R	T _J =25°C	-	50	μA
			T _J =125°C	-	10	mA
Typical junction capacitance	C _J	V _R =4V, f=1MHz		75	-	pF



S16EQ

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S16EQ
Typical Thermal Resistance	R _{θJA}	°C/W	98
	R _{θJL}	°C/W	30
	R _{θJC}	°C/W	15

Note:

(1) Thermal resistance from junction to ambient and from junction to lead and from junction to case mounted on P.C.B. with 5 mm x 5 mm copper pad areas.

■ Characteristics (Typical)

Fig.1:Forward Current Derating Curve

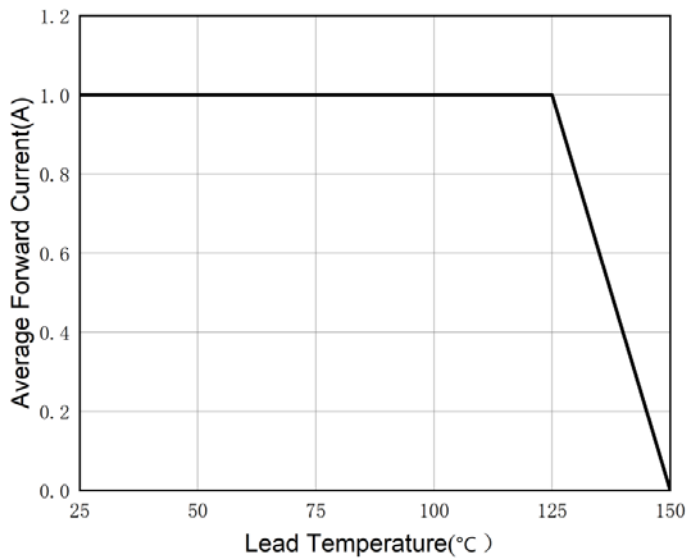


Fig.2: Maximum Non-Repetitive Peak Forward Surge Current

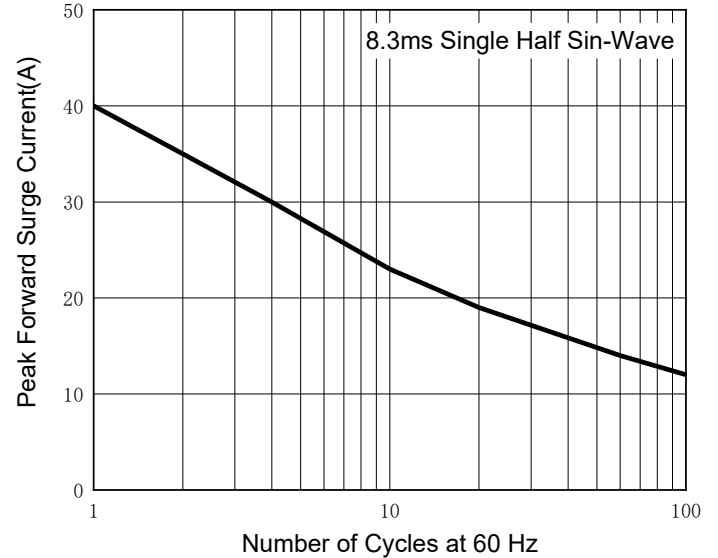


Fig.3: Typical Instantaneous Forward Characteristics

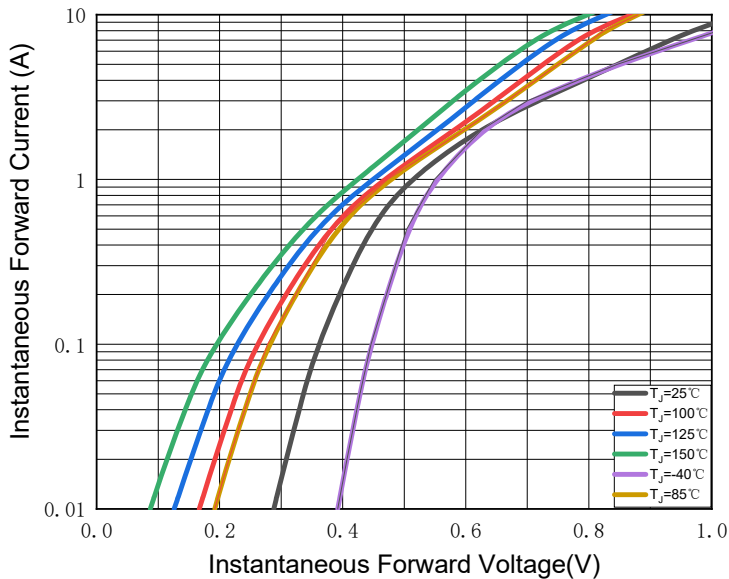
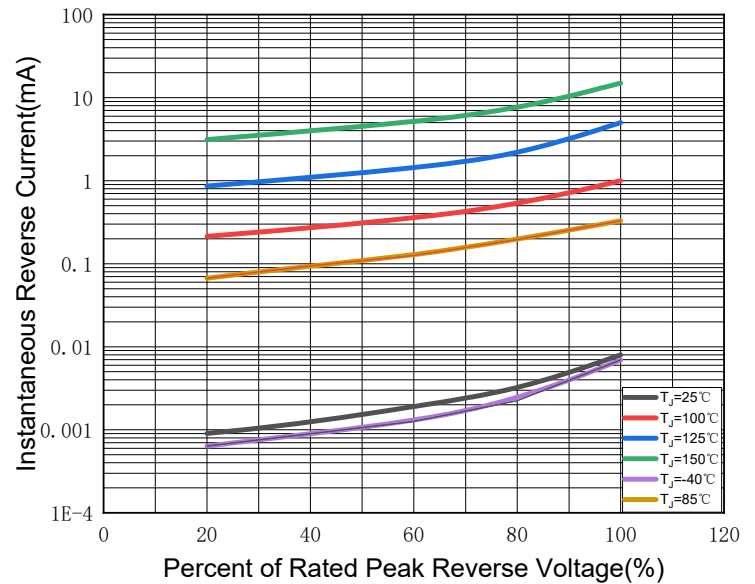


Fig.4: Typical Reverse Leakage Characteristics



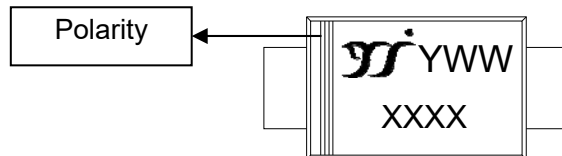


S16EQ

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S16EQ	F1	Approximate 0.024	3000	120000	7" reel

■ Marking Information



Note:

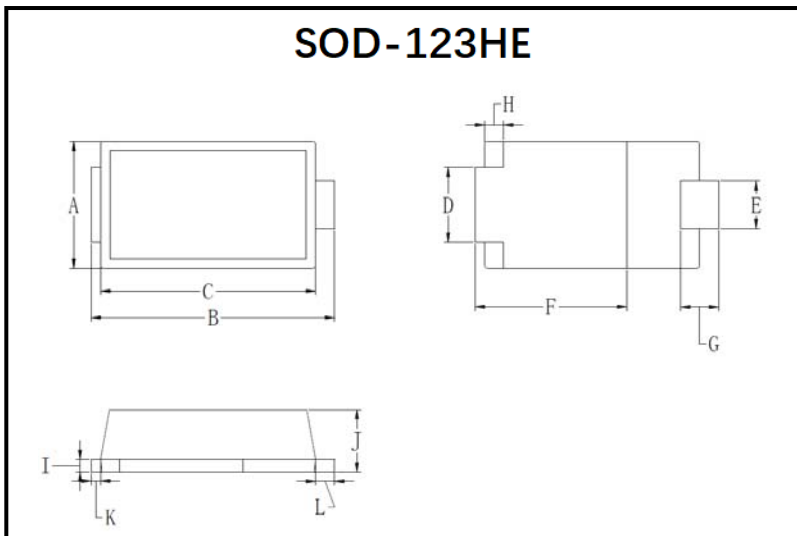
1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXX is marking code, like S16EQ marking code is S16E
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

The 17th week of 2022, date code is 217

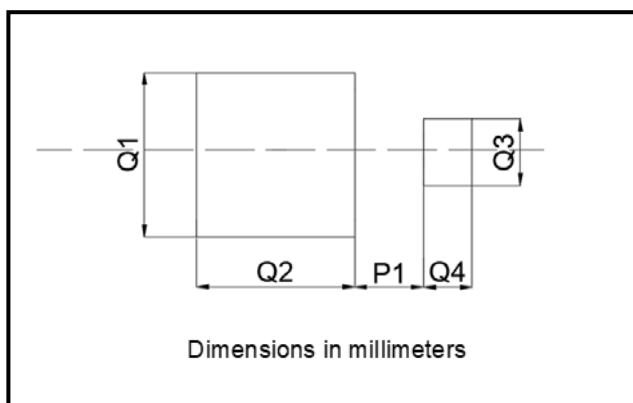
The 17th week of 2023, date code is 317

■ Outline Dimensions



SOD-123HE		
Dim	Min	Max
A	1.88	2.18
B	3.70	4.00
C	3.19	3.61
D	1.05	1.35
E	0.61	0.91
F	2.20	2.90
G	0.40	0.80
H	0.30 TYP	
I	0.10	0.30
J	0.85	1.15
K	0.00	0.30
L	0.15	0.45

■ Suggested pad layout



SOD-123HE	
Dim	Millimeters
P1	0.64
Q1	2.54
Q2	2.67
Q3	1.27
Q4	0.76



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.