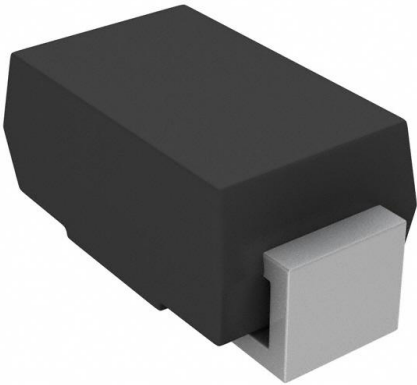


SS16-M3/5AT Datasheet

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<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	SS16-M3/5AT-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	SS16-M3/5AT
Description	DIODE SCHOTTKY 60V 1A DO214AC
Detailed Description	Diode 60 V 1A Surface Mount DO-214AC (SMA)

This model SS16-M3/5AT is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

SS16-M3/5AT

Series:

-

Technology:

Schottky

Current - Average Rectified (Io):

1A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Capacitance @ Vr, F:

-

Package / Case:

DO-214AC, SMA

Operating Temperature - Junction:

-65°C ~ 150°C

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

60 V

Voltage - Forward (Vf) (Max) @ If:

750 mV @ 1 A

Current - Reverse Leakage @ Vr:

200 µA @ 60 V

Mounting Type:

Surface Mount

Supplier Device Package:

DO-214AC (SMA)

Base Product Number:

SS16

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

SS12 thru SS16

Vishay General Semiconductor

**Surface Mount Schottky Barrier Rectifier**

DO-214AC (SMA)

RoHS
COMPLIANT**FEATURES**

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

TYPICAL APPLICATIONS

For use in low voltage, high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

MECHANICAL DATA**Case:** DO-214AC (SMA)

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test

Polarity: Color band denotes the cathode end**PRIMARY CHARACTERISTICS**

$I_{F(AV)}$	1.0 A
V_{RRM}	20 V to 60 V
I_{FSM}	40 A
V_F	0.50 V, 0.75 V
T_J max.	125 °C, 150 °C

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	SS12	SS13	SS14	SS15	SS16	UNIT
Device marking code		S2	S3	S4	S5	S6	V
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	V
Maximum average forward rectified current at T_L (Fig. 1)	$I_{F(AV)}$	1.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	40					A
Voltage rate of change (rated V_R)	dV/dt	10 000					V/ μ s
Operating junction temperature range	T_J	- 65 to + 125			- 65 to + 150		°C
Storage temperature range	T_{STG}	- 65 to + 150					°C



SS12 thru SS16

Vishay General Semiconductor

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)									
PARAMETER	TEST CONDITIONS	SYMBOL	SS12	SS13	SS14	SS15	SS16	UNIT	
Maximum instantaneous forward voltage ⁽¹⁾	1.0 A	V_F	0.50			0.75		V	
Maximum DC reverse current at rated DC blocking voltage ⁽¹⁾	$T_A = 25\text{ }^\circ\text{C}$	I_R	0.2						mA
	$T_A = 100\text{ }^\circ\text{C}$		6.0			5.0			

Note:

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)								
PARAMETER	SYMBOL	SS12	SS13	SS14	SS15	SS16	UNIT	
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	88						$^\circ\text{C/W}$
	$R_{\theta JL}$	28						

Note:

(1) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0 mm) copper pad areas

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SS14-E3/61T	0.064	61T	1800	7" diameter plastic tape and reel
SS14-E3/5AT	0.064	5AT	7500	13" diameter plastic tape and reel
SS14HE3/61T ⁽¹⁾	0.064	61T	1800	7" diameter plastic tape and reel
SS14HE3/5AT ⁽¹⁾	0.064	5AT	7500	13" diameter plastic tape and reel

Note:

(1) Automotive grade AEC Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

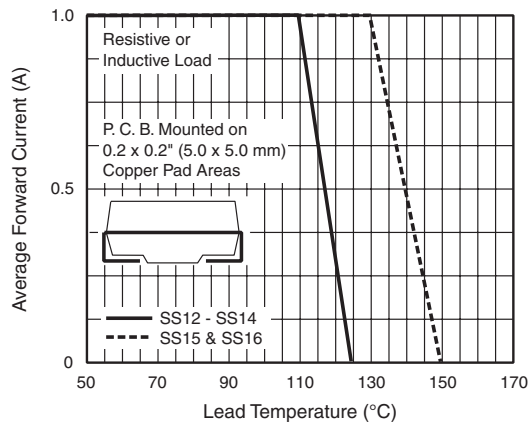


Figure 1. Forward Current Derating Curve

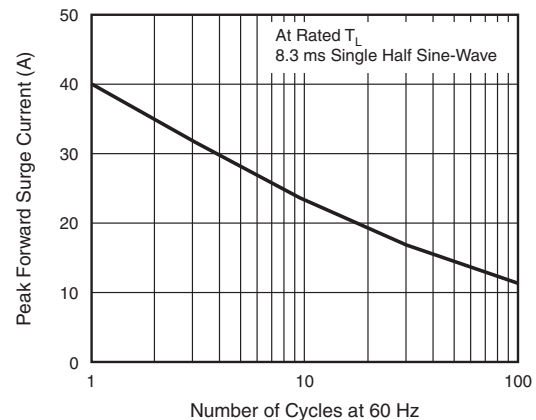


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

SS12 thru SS16

Vishay General Semiconductor

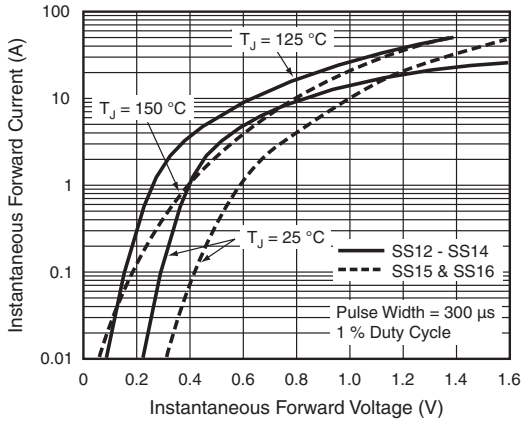


Figure 3. Typical Instantaneous Forward Characteristics

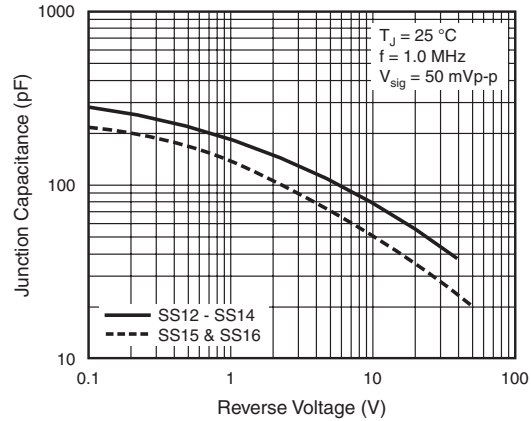


Figure 5. Typical Junction Capacitance

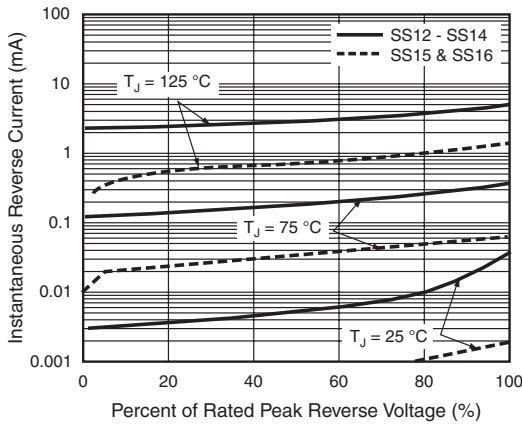
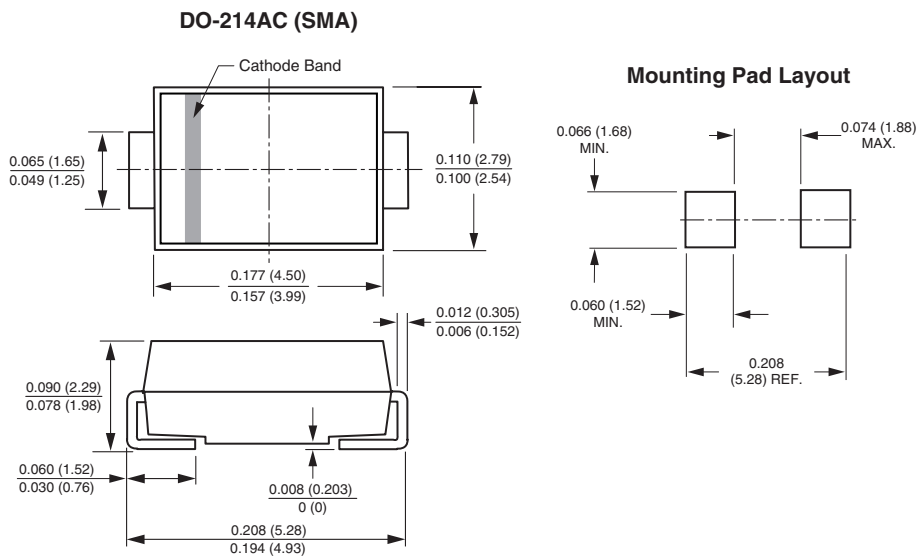


Figure 4. Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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