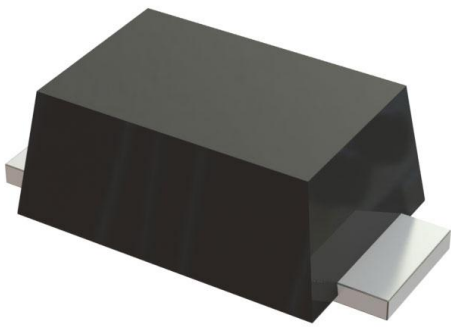


# ES07D-GS08 Datasheet

www.digi-electronics.com



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	ES07D-GS08-DG
Manufacturer	<a href="#">Vishay General Semiconductor - Diodes Division</a>
Manufacturer Product Number	ES07D-GS08
Description	DIODE GP 200V 500MA DO219AB
Detailed Description	Diode 200 V 500mA Surface Mount DO-219AB (SMF )

This model ES07D-GS08 is available at DiGi Electronics.

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## Purchase and inquiry

Manufacturer Product Number:

ES07D-GS08

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

500mA

Speed:

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

Current - Reverse Leakage @ Vr:

10  $\mu$ A @ 200 V

Mounting Type:

Surface Mount

Supplier Device Package:

DO-219AB (SMF)

Base Product Number:

ES07

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

200 V

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

980 mV @ 1 A

Reverse Recovery Time (trr):

25 ns

Capacitance @ Vr, F:

4pF @ 4V, 1MHz

Package / Case:

DO-219AB

Operating Temperature - Junction:

-55°C ~ 150°C

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0070

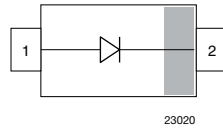
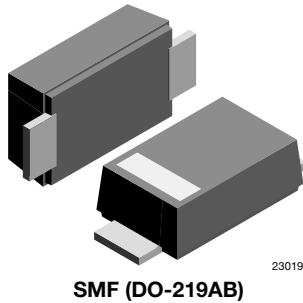
Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

## Ultrafast Rectifier Surface-Mount

**eSMP® Series**

**FEATURES**

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass passivated pellet chip junction
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Meets JESD 201 class 2 whisker test
- Wave and reflow solderable
- AEC-Q101 qualified
- Compatible to SOD-123W package case outline or SOD-123F and SOD-123FL
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

**LINKS TO ADDITIONAL RESOURCES**

**MECHANICAL DATA**
**Case:** SMF (DO-219AB)

**Polarity:** band denotes cathode end

**Weight:** approx. 15 mg

**Packaging codes / options:**

GS18/10K per 13" reel (8 mm tape)

GS08/3K per 7" reel (8 mm tape)

**Circuit configuration:** single

**PARTS TABLE**

PART	ORDERING CODE	MARKING	REMARKS
ES07B	ES07B-GS18 or ES07B-GS08	EB	Tape and reel
ES07D	ES07D-GS18 or ES07D-GS08	ED	Tape and reel

**ABSOLUTE MAXIMUM RATINGS** ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		ES07B	$V_{RRM}$	100	V
		ES07D	$V_{RRM}$	200	V
Maximum RMS voltage		ES07B	$V_{RMS}$	70	V
		ES07D	$V_{RMS}$	140	V
Maximum DC blocking voltage		ES07B	$V_{DC}$	100	V
		ES07D	$V_{DC}$	200	V
Maximum average forward rectified current	$T_L = 109\text{ °C}$		$I_{F(AV)}$	1.2	A
	$T_A = 65\text{ °C}^{(1)}$		$I_{F(AV)}$	0.5	A
Peak forward surge current 8.3 ms single half sine-wave	$T_L = 25\text{ °C}$		$I_{FSM}$	30	A

**Note**
<sup>(1)</sup> Mounted on epoxy glass PCB with 3 mm x 3 mm Cu pads ( $\geq 40\text{ }\mu\text{m}$  thick)

**THERMAL CHARACTERISTICS** ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air <sup>(1)</sup>		$R_{thJA}$	180	K/W
Operating junction and storage temperature range		$T_j, T_{stg}$	-55 to 150	°C

**Note**
<sup>(1)</sup> Mounted on epoxy glass PCB with 3 mm x 3 mm Cu pads ( $\geq 40\text{ }\mu\text{m}$  thick)



ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Instantaneous forward voltage	$I_F = 1\text{ A}^{(1)}$	ES07B	$V_F$			0.98	V
		ES07D	$V_F$			0.98	V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^{\circ}\text{C}$	ES07B	$I_R$			10	$\mu\text{A}$
		ES07D	$I_R$			10	$\mu\text{A}$
	$T_A = 100\text{ }^{\circ}\text{C}$	ES07B	$I_R$			50	$\mu\text{A}$
		ES07D	$I_R$			50	$\mu\text{A}$
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_{rr} = 0.25\text{ A}$	ES07B	$t_{rr}$			25	ns
		ES07D	$t_{rr}$			25	ns
Typical capacitance	4 V, 1 MHz	ES07B	$C_j$		4		pF
		ES07D	$C_j$		4		pF

**Note**

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

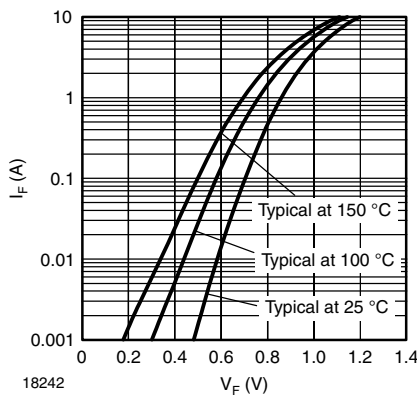


Fig. 1 - Typical Forward Characteristics

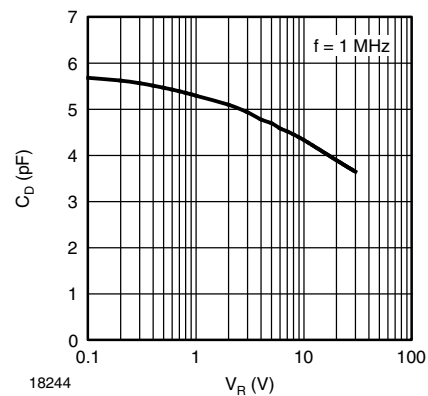


Fig. 3 - Typical Diode Capacitance vs. Reverse Voltage

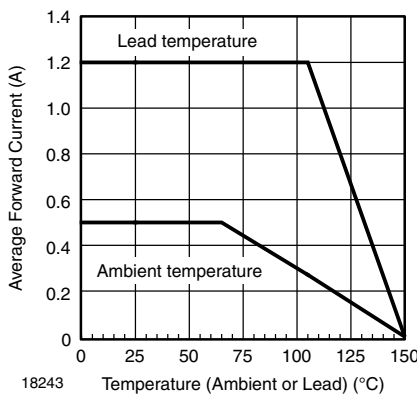


Fig. 2 - Forward Current Derating Curve

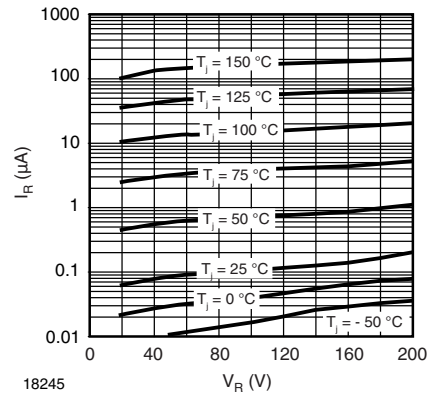
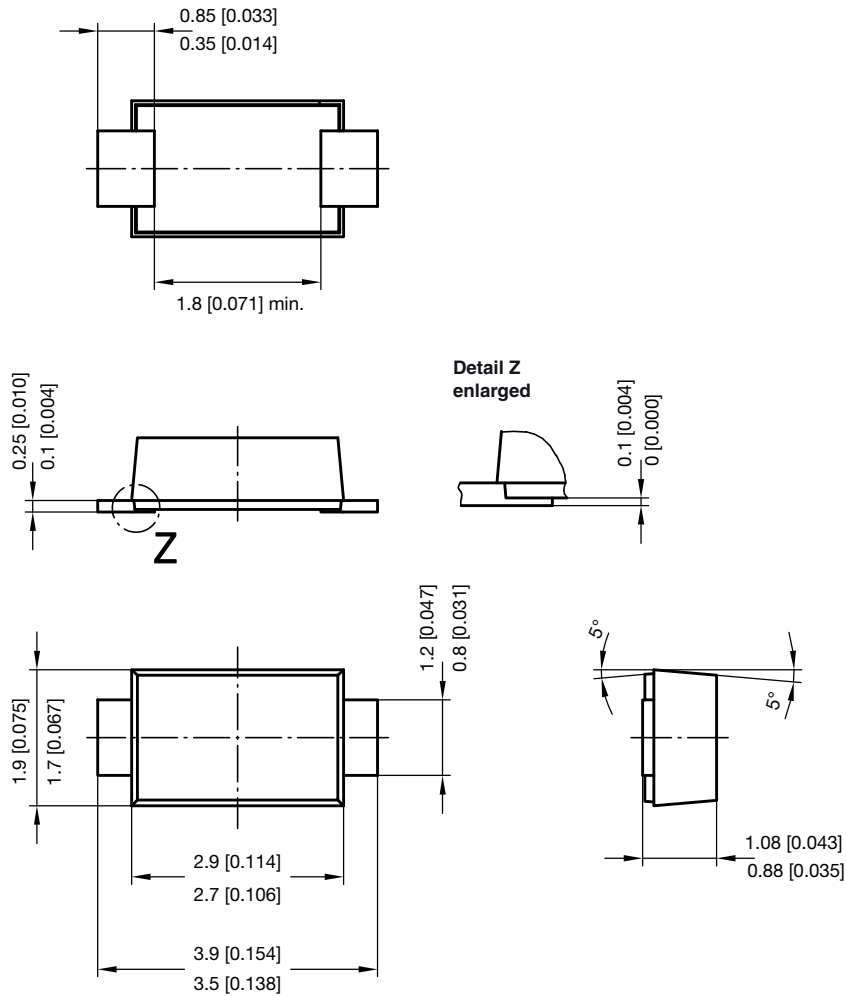
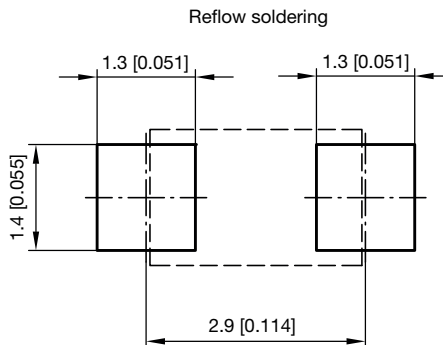


Fig. 4 - Typical Reverse Characteristics

**PACKAGE DIMENSIONS** in millimeters (inches): **SMF (DO-219AB)**

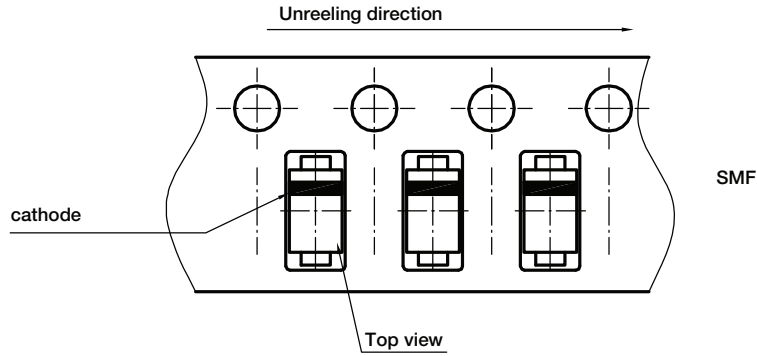


foot print recommendation:



Created - Date: 15. February 2005  
 Rev. 6 - Date: 24.Feb.2021  
 Document no.: S8-V-3915.01-001 (4)  
 22989

## ORIENTATION IN CARRIER TAPE - SMF (DO-219AB)



Document no.: S8-V-3717.02-003 (4)  
Created - Date: 09. Feb. 2010  
22670



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