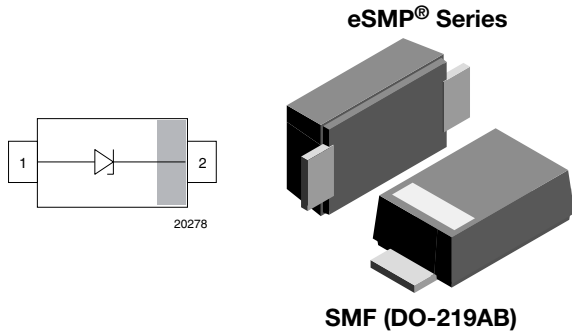




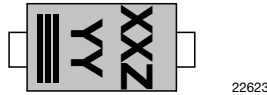
# THE DATASHEET OF SMF6V5A-HE3-18



## Surface-Mount ESD Protection Diodes



### MARKING (example only)



Bar = cathode marking  
 YY = type code (see table below)  
 XX = date code  
 Z = location code (optional)

### FEATURES

- 200 W peak pulse power capability with a 10/1000  $\mu$ s waveform, repetition rate (duty cycle): 0.01 %
- Low profile package
- Wave and reflow solderable
- ESD immunity acc. IEC 61000-4-2  $\pm$  30 kV contact discharge  $\pm$  30 kV air discharge
- ESD capability according to AEC-Q101: human body model: class H3B: > 8 kV
- Low incremental surge resistance, excellent clamping capability
- “Low Noise” technology - very fast response time
- AEC-Q101 qualified available
- 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)

 AUTOMOTIVE  
GRADE  
Available

**RoHS**  
COMPLIANT

### LINKS TO ADDITIONAL RESOURCES



ORDERING INFORMATION							
PART NUMBER (EXAMPLE)	ENVIRONMENTAL AND QUALITY CODE			REVISION CODE	PACKAGING CODE		ORDERING CODE (EXAMPLE)
	AEC-Q101 QUALIFIED	RoHS-COMPLIANT + LEAD (Pb)-FREE TERMINATIONS	TIN PLATED		3K PER 7" REEL (8 mm TAPE), MOQ = 30K	10K PER 13" REEL (8 mm TAPE), MOQ = 50K	
SMF5V0A-		E	3	-	08		SMF5V0A-E3-08
SMF5V0A-	H	E	3	_A	08		SMF5V0A-HE3_A08
SMF5V0A-		E	3	-		18	SMF5V0A-E3-18
SMF5V0A-	H	E	3	_A		18	SMF5V0A-HE3_A18

PACKAGE DATA								
PACKAGE NAME	WEIGHT (mg)	HEIGHT MAX. (mm)	LENGTH MAX. (mm)	WIDTH MAX. (mm)	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	WHISKER TEST ACC. JESD 201	SOLDERING CONDITIONS
SMF (DO-219AB)	15	1.08	3.9	1.9	UL 94 V-0	MSL level 1 (acc. J-STD-020)	Class 2	Peak temperature max. 260 °C



## TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)



Fig. 1 - ESD Discharge Current Wave Form acc. IEC 61000-4-2 (330 Ω/150pF)



Fig. 4 - Pulse Waveform



Fig. 2 - 8/20 μs Peak Pulse Current Wave Form acc. IEC 61000-4-5

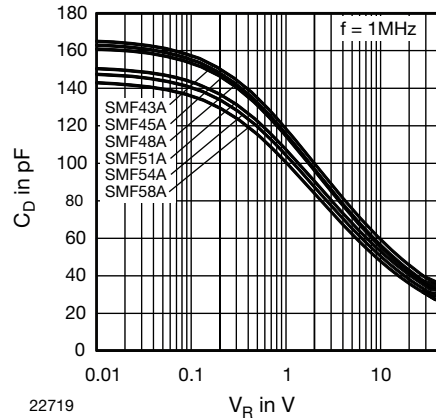


Fig. 5 - Typical Capacitance C<sub>D</sub> vs. Reverse Voltage V<sub>R</sub>



Fig. 3 - Peak Pulse Power Rating

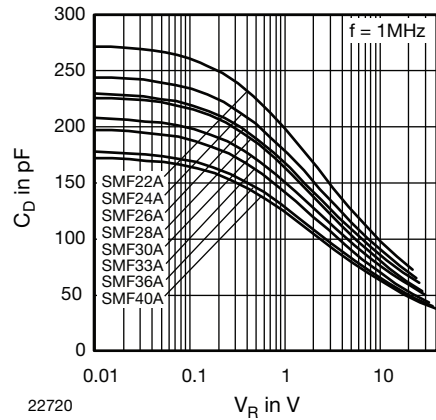


Fig. 6 - Typical Capacitance C<sub>D</sub> vs. Reverse Voltage V<sub>R</sub>



Fig. 7 - Typical Capacitance  $C_D$  vs. Reverse Voltage  $V_R$



Fig. 10 - Typical Reverse Voltage  $V_R$  vs. Reverse Current  $I_R$



Fig. 8 - Typical Capacitance  $C_D$  vs. Reverse Voltage  $V_R$



Fig. 11 - Typical Reverse Voltage  $V_R$  vs. Reverse Current  $I_R$



Fig. 9 - Typical Reverse Voltage  $V_R$  vs. Reverse Current  $I_R$



Fig. 12 - Typical Reverse Voltage  $V_R$  vs. Reverse Current  $I_R$



## 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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