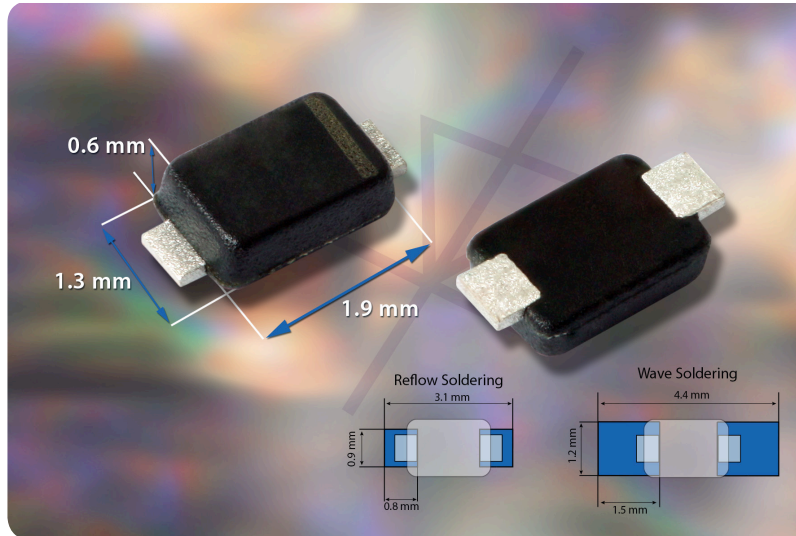


**PLZ Series 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) eSMP® Series Package**



**KEY BENEFITS**

- Ultra compact MicroSMF (DO-219AC) flat lead package with low profile of < 0.6 mm
- Wave- and reflow-solderable
- 500 mW power dissipation
- Extremely tight tolerances of  $\pm 2.5 \%$
- Low leakage current
- Excellent stability
- Withstands ESD pulses of 8000 V (human body model)
- AEC-Q101 qualified and Vishay Automotive Grade
- RoHS-compliant, halogen-free, and Vishay Green

**APPLICATIONS**

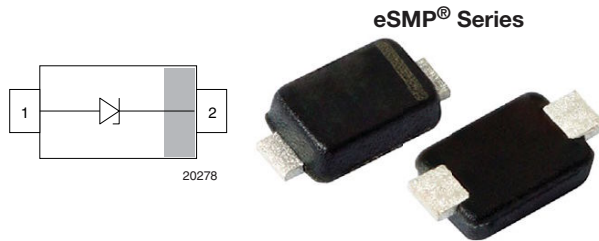
- Voltage stabilization and reference voltage generation in power supplies and LED lighting

**RESOURCES**

- Datasheet: PLZ Series - [www.vishay.com/ppg?84830](http://www.vishay.com/ppg?84830)
- For technical questions contact [DiodesAmericas@vishay.com](mailto:DiodesAmericas@vishay.com), [DiodesAsia@vishay.com](mailto:DiodesAsia@vishay.com), [DiodesEurope@vishay.com](mailto:DiodesEurope@vishay.com)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



## PLZ Series 500 mW Zener Diodes in Low Profile MicroSMF (DO-219AC) eSMP® Series Package


**DESIGN SUPPORT TOOLS**
[click logo to get started](#)
**3D**  
Models  
Available

PRIMARY CHARACTERISTICS		
PARAMETER	VALUE	UNIT
$V_Z$ range nom.	2.0 to 39	V
Test current $I_{ZT}$	5 to 20	mA
$V_Z$ specification	Pulse current	
Circuit configuration	Single	

**FEATURES**

- Silicon planar Zener diodes, ultra small
- Low profile MicroSMF (DO-219AC) package
- Low leakage current
- Excellent stability
- High temperature soldering: 260 °C / 10 s at terminals
- Wave and reflow solderable (reflow as per JPC / JEDEC® J-STD 020) (double wave as per IEC 61760-1)
- AEC-Q101 qualified available
- Base P/N-G3 - RoHS-compliant, green, industrial grade
- Base P/N-HG3 - RoHS-compliant, green, AEC-Q101 qualified
- ESD immunity acc. IEC 61000-4-2 acc. to part table
- Surge performance acc. to part table
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

 AUTOMOTIVE  
GRADE  
Available

**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

ORDERING INFORMATION			
DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
PLZ-Series	Part number-G3/H	4500 per 7" reel (8 mm tape)	22 500 / box
PLZ-Series	Part number-HG3/H		

PACKAGE				
PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
MicroSMF (DO-219AC)	4.8 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C / 10 s at terminals

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Power dissipation	Mounted on FR4 board 50 mm x 50 mm x 1.6 mm, solder land 10 mm x 10 mm, $T_{amb} = 85\text{ °C}$	$P_{tot}$	500		mW
Power dissipation	Mounted on FR4 board 50 mm x 50 mm x 1.6 mm, solder land 10 mm x 10 mm, $T_{amb} = 25\text{ °C}$	$P_{tot}$	960		
Power dissipation	Mounted on FR4 board with recommended soldering footpads (reflow)	$P_{tot}$	340		
Non-repetitive peak surge power dissipation	$t_p = 8/20\ \mu\text{s}$ acc. IEC 61000-4-5 (PLZ5V1A to PLZ39D)	$P_{ZSM}$	100		W
	$t_p = 8/20\ \mu\text{s}$ acc. IEC 61000-4-5 (PLZ2V0A to PLZ4V7C)	$P_{ZSM}$	70		W
Z-current		$I_Z$	$P_{tot}/V_Z$		mA
Junction temperature		$T_j$	150		°C
Storage temperature range		$T_{stg}$	-55 to +150		

THERMAL CHARACTERISTICS ( $T_{amb} = 25\text{ °C}$ , unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Typ. thermal resistance junction to ambient air	Mounted on FR4 board 50 mm x 50 mm x 1.6 mm, solder land 10 mm x 10 mm	$R_{thJA}$	130		K/W
Typ. thermal resistance junction to lead		$R_{thJL}$	40		K/W

Revision 1.3, 19-Nov-2018