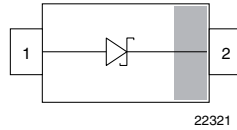
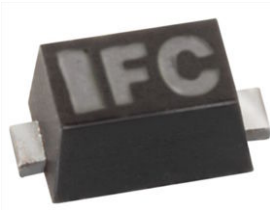


## Small Signal Schottky Diode



### LINKS TO ADDITIONAL RESOURCES



### MECHANICAL DATA

**Case:** SOD-523

**Weight:** approx. 1.4 mg

**Molding compound flammability rating:** UL 94 V-0

**Terminals:** high temperature soldering guaranteed:  
260 °C/10 s at terminals

**Packaging codes / options:**  
08/8K per 7" reel (8 mm tape)

### FEATURES

- This diode features very low turn-on voltage and fast switching
- AEC-Q101 qualified available
- Space saving SOD-523 package
- Base P/N-G3 - RoHS-compliant, commercial grade
- Base P/N-HG3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### PARTS TABLE

PART	ORDERING CODE	AEC-Q101 QUALIFIED	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAS581-02V	BAS581-02V-G3-08	no	Single	.Z	Tape and reel
	BAS581-02V-HG3-08	yes			

### ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reserve voltage = working peak reserve voltage		V <sub>RRM</sub>	40	V
Forward continuous current		I <sub>F</sub>	30	mA
Surge forward current	t <sub>p</sub> = 10 ms square wave, T <sub>j</sub> = 25 °C prior to surge	I <sub>FSM</sub>	200	mA
Power dissipation	on FR-4 board with recommended soldering footprint	P <sub>tot</sub>	150	mW

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

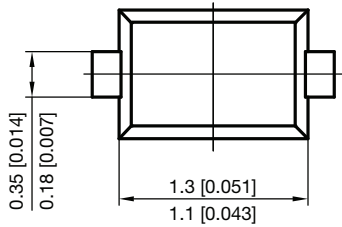
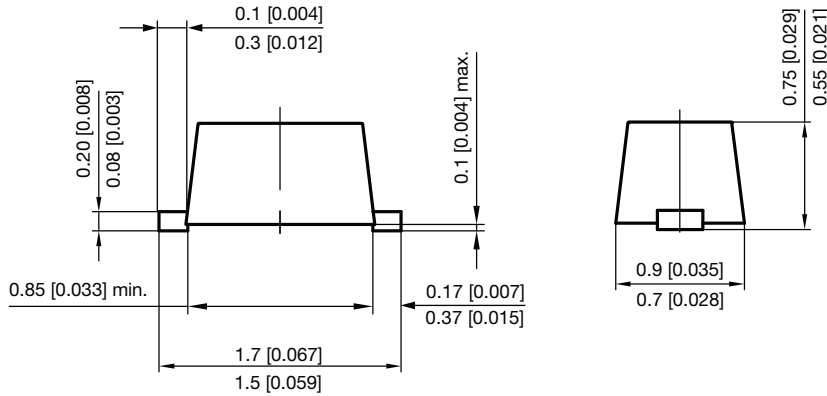
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	on FR-4 board according to JEDEC® 51-3 with recommended soldering footprint	R <sub>thJA</sub>	680	K/W
Thermal resistance junction to lead		R <sub>thJL</sub>	480	K/W
Junction temperature		T <sub>j</sub>	125	°C
Operating temperature range		T <sub>op</sub>	-55 to +125	°C
Storage temperature range		T <sub>stg</sub>	-55 to +150	°C

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

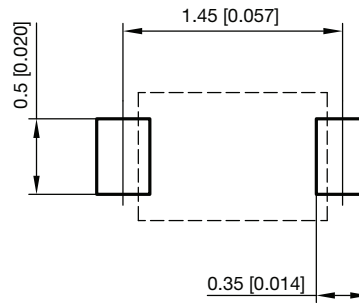
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I <sub>R</sub> = 100 μA	V <sub>(BR)</sub>	40			V
Leakage current	V <sub>R</sub> = 30 V	I <sub>R</sub>			0.5	μA
Forward voltage	I <sub>F</sub> = 1 mA	V <sub>F</sub>			370	mV
Diode capacitance	V <sub>R</sub> = 1 V, f = 1 MHz	C <sub>D</sub>			2	pF



PACKAGE DIMENSIONS in millimeters [inches]: SOD-523



Footprint recommendation:



Document no.: S8-V-3880.02-003 (4)  
 Created - Date: 04. April 2017  
 Rev. 4 - Date: 03. Aug. 2020  
 23093



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