

## Band Switching Diodes



94 9371

### MECHANICAL DATA

**Case:** MiniMELF SOD-80

**Weight:** approx. 31 mg

**Cathode band color:** black

**Packaging codes/options:**

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

GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

### FEATURES

- Silicon planar diodes
- Low dynamic forward resistance
- Low diode capacitance
- High reverse impedance
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### APPLICATIONS

- Band switching in VHF-tuners

### PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	REMARKS
BA682	$V_R = 35\text{ V}$ , $r_f$ at $I_F 3\text{ mA} = \text{max. } 0.7\ \Omega$	BA682-GS18 or BA682-GS08	Tape and reel
BA683	$V_R = 35\text{ V}$ , $r_f$ at $I_F 3\text{ mA} = \text{max. } 1.2\ \Omega$	BA683-GS18 or BA683-GS08	Tape and reel

### ABSOLUTE MAXIMUM RATINGS <sup>(1)</sup>

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Reverse voltage		$V_R$	35	V
Forward continuous current		$I_F$	100	mA

**Note**
<sup>(1)</sup>  $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified

### THERMAL CHARACTERISTICS <sup>(1)</sup>

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction to ambient air	On PC board 50 mm x 50 mm x 1.6 mm	$R_{thJA}$	500	K/W
Junction temperature		$T_j$	150	$^\circ\text{C}$
Storage temperature range		$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

**Note**
<sup>(1)</sup>  $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified

### ELECTRICAL CHARACTERISTICS <sup>(1)</sup>

PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 100\text{ mA}$		$V_F$			1000	mV
Reverse current	$V_R = 20\text{ V}$		$I_R$			50	nA
Diode capacitance	$f = 100\text{ MHz}$ , $V_R = 1\text{ V}$		$C_{D1}$			1.5	pF
	$f = 100\text{ MHz}$ , $V_R = 3\text{ V}$	BA682	$C_{D2}$			1.25	pF
Dynamic forward resistance	$f = 200\text{ MHz}$ , $I_F = 3\text{ mA}$	BA683	$C_{D2}$			1.2	pF
		BA682	$r_{f1}$			0.7	$\Omega$
	$f = 200\text{ MHz}$ , $I_F = 10\text{ mA}$	BA683	$r_{f1}$			1.2	$\Omega$
		BA682	$r_{f2}$			0.5	$\Omega$
		BA683	$r_{f2}$			0.9	$\Omega$

**Note**
<sup>(1)</sup>  $T_{amb} = 25\text{ }^\circ\text{C}$ , unless otherwise specified

**TYPICAL CHARACTERISTICS** Tamb = 25 °C, unless otherwise specified

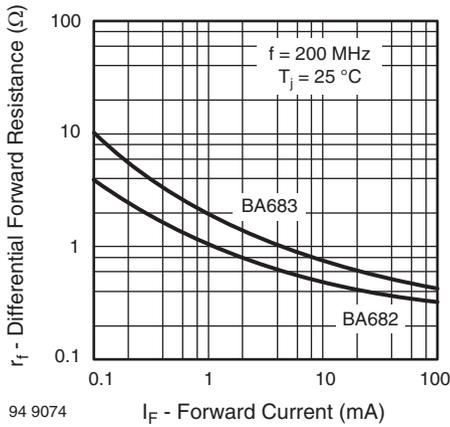


Fig. 1 - Dynamic Forward Resistance vs. Forward Current

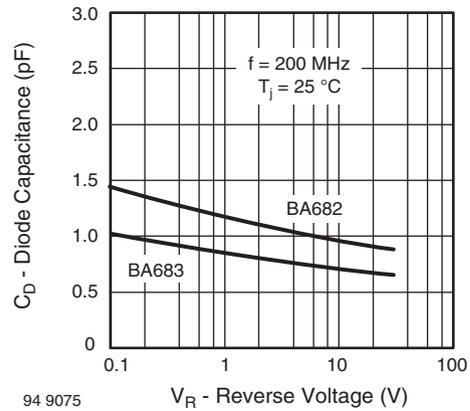
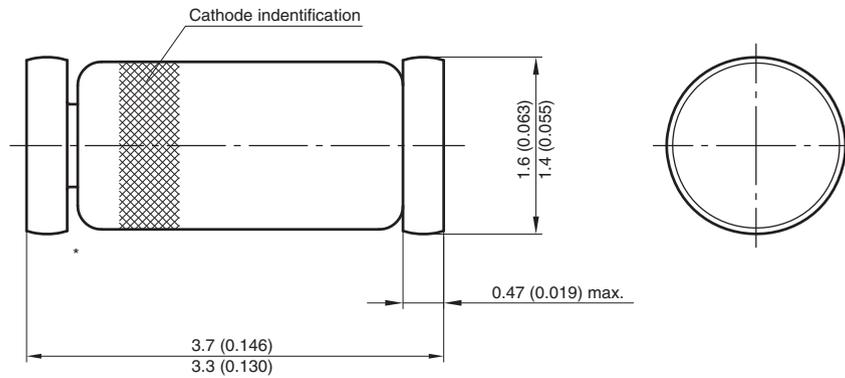
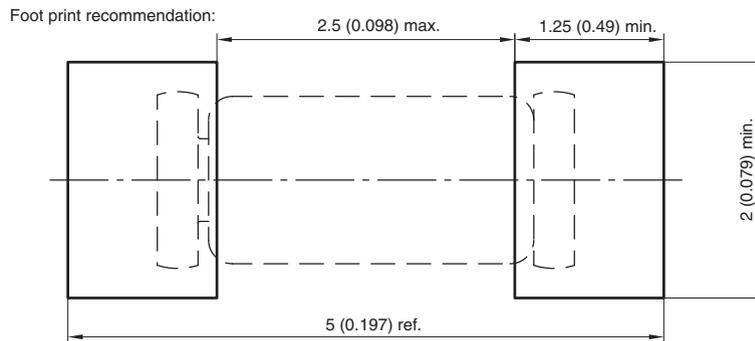


Fig. 1 - Diode Capacitance vs. Reverse Voltage

**PACKAGE DIMENSIONS** in millimeters (inches): **MiniMELF SOD-80**



\* The gap between plug and glass can be either on cathode or anode side



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