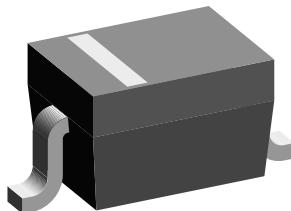


Band Switching Diodes



20145

MECHANICAL DATA

Case: SOD-323

Weight: approx. 4.3 mg

Packaging codes/options:

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

GS08/3K per 7" reel (8 mm tape), 15K/box

FEATURES

- These diodes are also available in SOD-123 case with the type designations BA782-V and BA783-V
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC


RoHS
COMPLIANT

DESCRIPTION

Silicon epitaxial planar diode switches

For electric bandswitching in radio and TV tuners in the frequency range of (50 to 1000) MHz. The dynamic forward resistance is constant and very small over a wide range of frequency and forward current. The reverse capacitance is also small and largely independent of the reverse voltage.

PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	REMARKS
BA782S-V	BA782S-V-GS18 or BA782S-V-GS08	R2	Tape and reel
BA783S-V	BA783S-V-GS18 or BA783S-V-GS08	R3	Tape and reel

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

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

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	- 55 to + 150	°C

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25$ °C, unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 100$ mA		V_F			1000	mV
Reverse current	$V_R = 20$ V		I_R			50	nA
Diode capacitance	$f = 1$ MHz, $V_R = 1$ V	BA782S-V	C_{D1}			1.5	pF
	$f = 1$ MHz, $V_R = 3$ V		C_{D2}			1.25	pF
			C_{D2}			1.2	pF
Dynamic forward resistance	$f = (50$ to $1000)$ MHz, $I_F = 3$ mA	BA782S-V	r_{f1}			0.7	Ω
		BA783S-V	r_{f1}			1.2	Ω
	$f = (50$ to $1000)$ MHz, $I_F = 10$ mA	BA782S-V	r_{f2}			0.5	Ω
		BA783S-V	r_{f2}			0.9	Ω
Series inductance across case			L_S		2.5		nH

BA782S-V, BA783S-V

Vishay Semiconductors

Band Switching Diodes



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

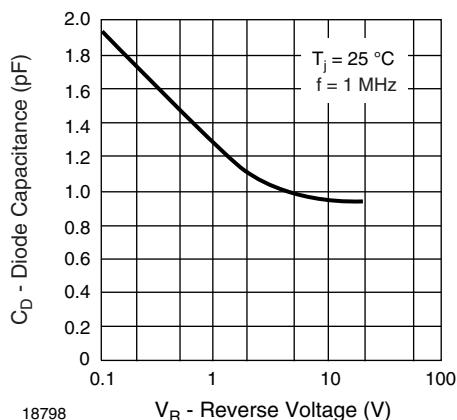


Fig. 1 - Diode Capacitance

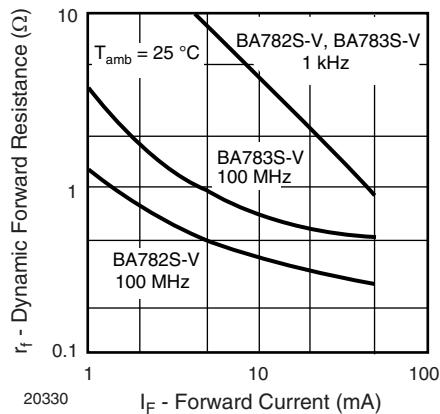
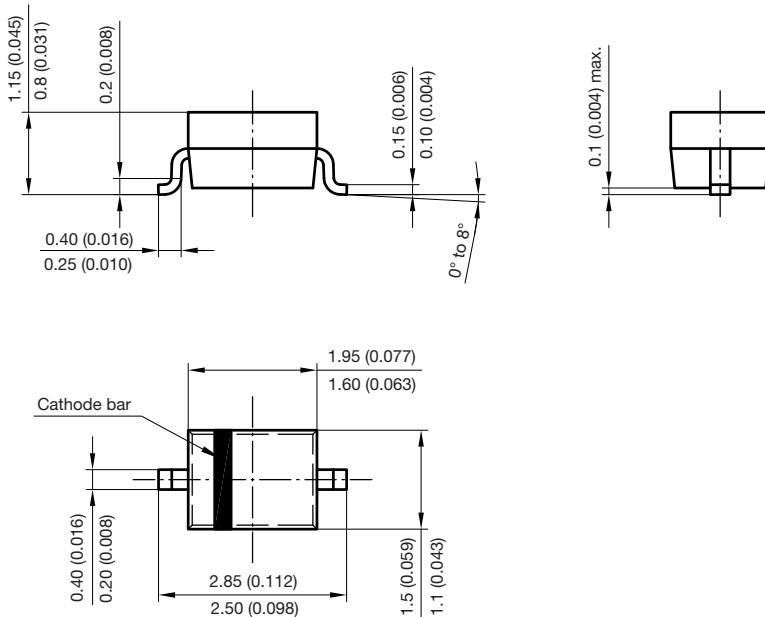
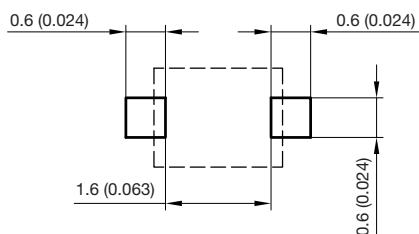


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

PACKAGE DIMENSIONS in millimeters (inches): **SOD-323**



Foot print recommendation:



Document no.:S8-V-3910.02-001 (4)

Created - Date: 24.August.2004

Rev. 5 - Date: 23.Sept.2009

17443

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