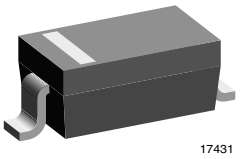
Band Switching Diodes



FEATURES

- These diodes are also available in SOD-323 case with the type designations BA782S-V and BA783S-V
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT

MECHANICAL DATA

Case: SOD-123

Weight: approx. 10.3 mg

Packaging codes/options:
GS18/10K per 13" reel (8 mm tape), 10K/box
GS08/3K per 7" reel (8 mm tape), 15K/box

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
BA782-V	BA782-V-GS18 or BA782-V-GS08	R2	Tape and reel
BA783-V	BA783-V-GS18 or BA783-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		C_{D1}			1.5	pF
	f = 1 MHz, V_R = 3 V	BA782-V	C_{D2}			1.25	pF
		BA783-V	C_{D2}			1.2	pF
Dynamic forward resistance	f = (50 to 1000) MHz, I_F = 3 mA	BA782-V	r_{f1}			0.7	Ω
		BA783-V	r_{f1}			1.2	Ω
	f = (50 to 1000) MHz, I_F = 10 mA	BA782-V	r_{f2}			0.5	Ω
		BA783-V	r_{f2}			0.9	Ω
Series inductance across case			L_S		2.5		nH

TYPICAL CHARACTERISTICS T_{amb} = 25 °C, unless otherwise specified

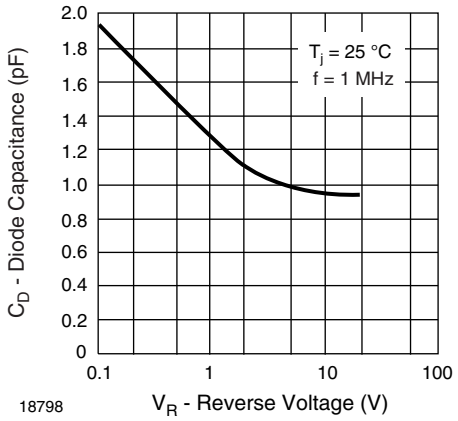


Fig. 1 - Diode Capacitance

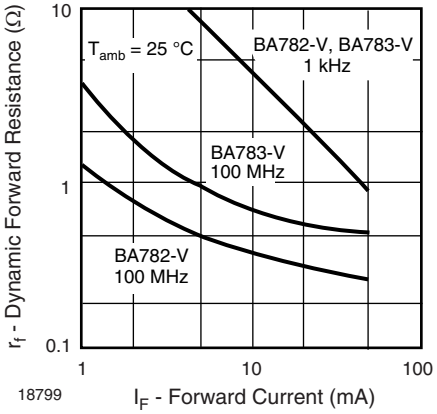
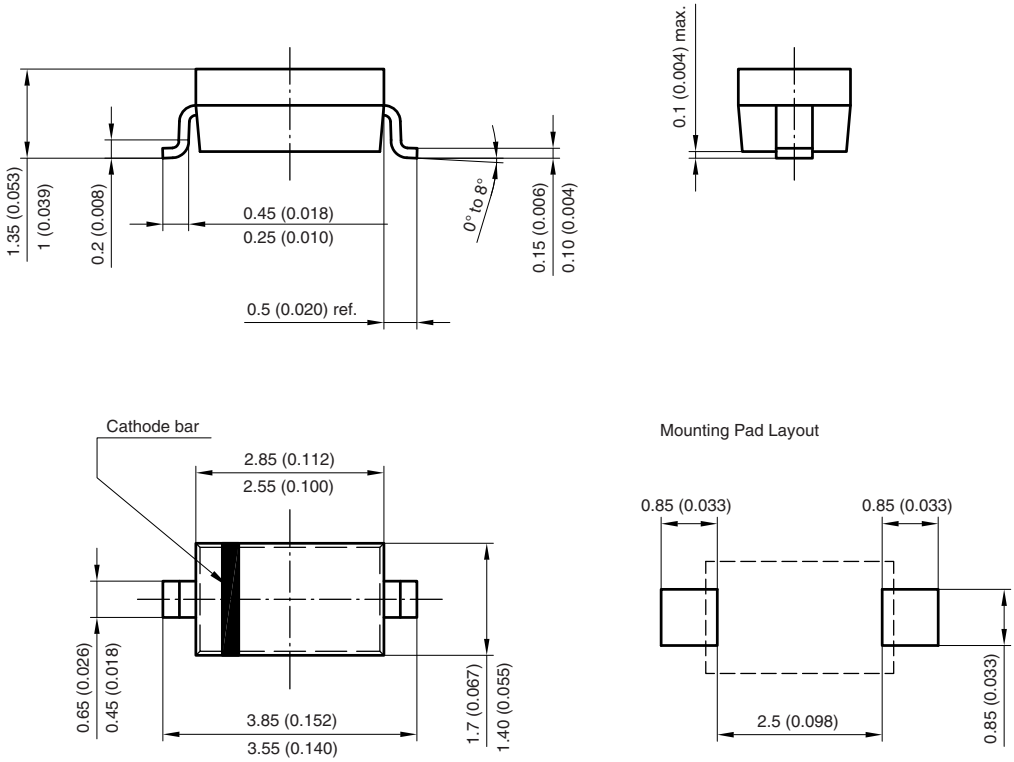


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

PACKAGE DIMENSIONS in millimeters (inches): SOD-123



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