

Band Switching Diodes



MECHANICAL DATA

Case: SOD-123

Weight: approx. 10.3 mg

Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

FEATURES

- Silicon epitaxial planar diode switches
- AEC-Q101 qualified
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

DESCRIPTION

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	BA782-E3-08 or BA782-E3-18	R2	Tape and reel
	BA782-HE3-08 or BA782-HE3-18		
BA783	BA783-E3-08 or BA783-E3-18	R3	Tape and reel
	BA783-HE3-08 or BA783-HE3-18		

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)

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

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction temperature		T_J	125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 55 to + 150	$^{\circ}\text{C}$
Operating temperature range		T_{op}	- 55 to + 125	$^{\circ}\text{C}$

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

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

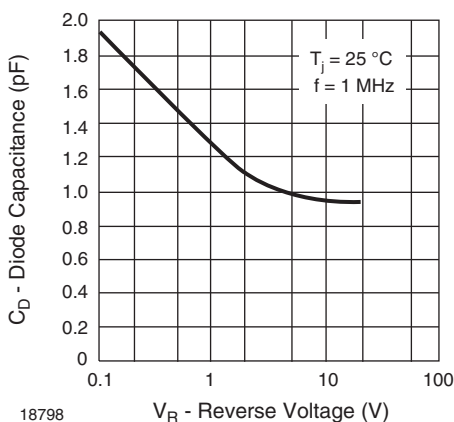
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Diode Capacitance

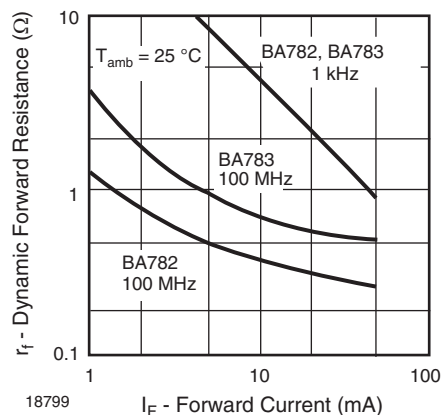
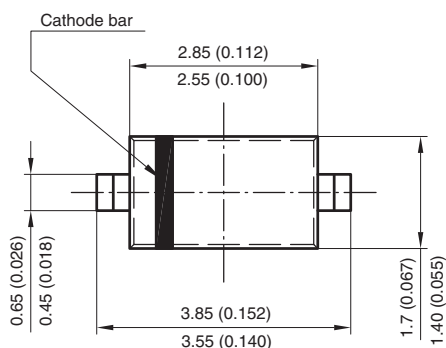
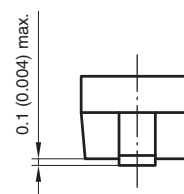
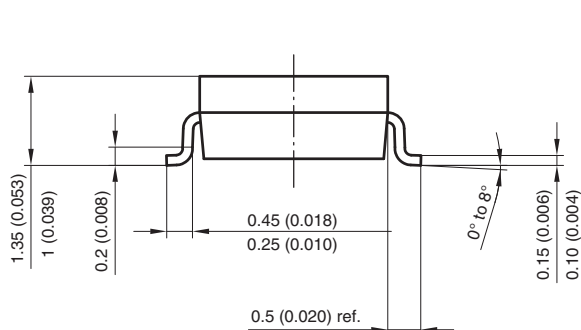
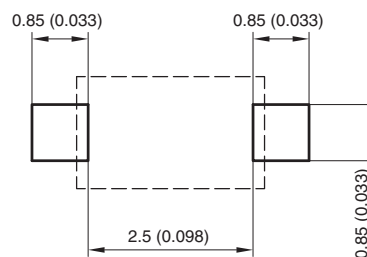


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

PACKAGE DIMENSIONS in millimeters (inches): **SOD-123**


Mounting Pad Layout



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Mouser Electronics

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