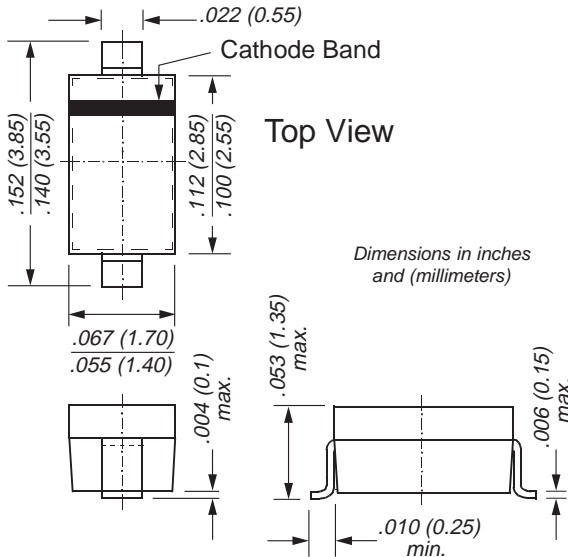
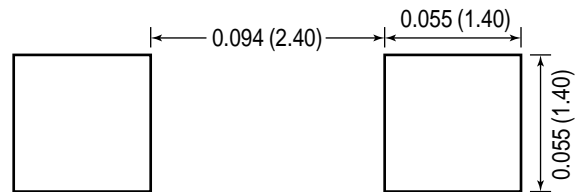


## Bandswitching Diodes


**SOD-123**

**Mounting Pad Layout**


### Features

- Silicon Epitaxial Planar Diode Switches
- For electric bandswitching in radio and TV tuners in the frequency range of 50...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.
- These diodes are also available in SOD-323 case with the type designations BA782S and BA783S.

### Mechanical Data

**Case:** SOD-123 plastic case

**Weight:** approximately 0.01g

**Cathode Band Color:** Blue

**Packaging Codes/Options:**

D3/10K per 13" reel (8mm tape), 30K/box

D4/3K per 7" reel (8mm tape), 30K/box

### Maximum Ratings and Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	35	V
Forward Continuous Current at $T_{amb} = 25^\circ\text{C}$	$I_F$	100	mA
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to +125	$^\circ\text{C}$

# BA782 and BA783

Vishay Semiconductors  
formerly General Semiconductor



## Electrical Characteristics

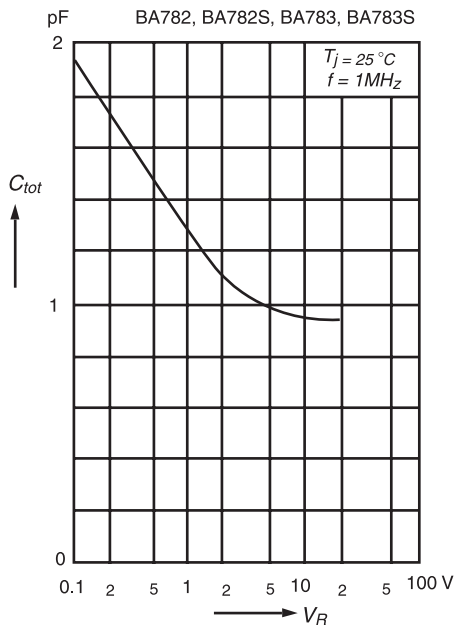
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Forward Voltage	$V_F$	$I_F = 100\text{mA}$	—	—	1	V	
Leakage Current	$I_R$	$V_R = 20\text{V}$	—	—	50	nA	
Dynamic Forward Resistance	BA782 BA783	$r_f$	$f = 50\dots 1000\text{MHz}$ , $I_F = 3\text{mA}$	—	—	0.7	$\Omega$
				—	—	1.2	
Dynamic Forward Resistance	BA782 BA783	$r_f$	$f = 50\dots 1000\text{MHz}$ , $I_F = 10\text{mA}$	—	—	0.5	$\Omega$
				—	—	0.9	
Capacitance	BA782 BA783	$C_{tot}$	$V_R = 1\text{V}$ , $f = 1\text{MHz}$	—	—	1.5	pF
			$V_R = 3\text{V}$ , $f = 1\text{MHz}$	—	—	1.25	
Series Inductance across Case	$L_S$	—	—	2.5	—	nH	

## Ratings and

## Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Capacitance  
versus reverse voltage



Dynamic forward resistance  
versus forward voltage

