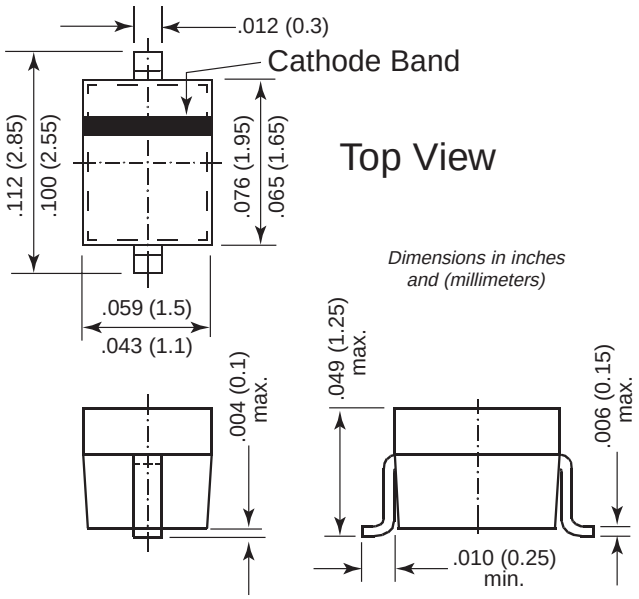
GENERAL SEMICONDUCTOR®

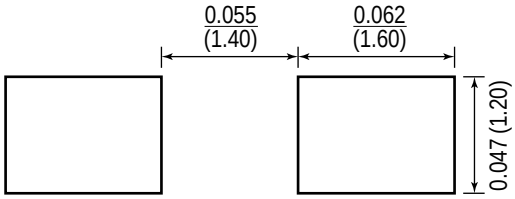
BA782S and BA783S

Bandswitching Diodes

SOD-323



Pad Layout SOD-323



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-123 case with the type designations BA782 and BA783.

Mechanical Data

Case: SOD-323 plastic case

Weight: approximately 0.004g

Cathode Band Color: Blue

Packaging Codes/Options:

D5/10K per 13” reel (8mm tape), 30K/box

D6/3K 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°C	I_F	100	mA
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_S	–55 to +125	°C

BA782S and BA783S

Bandswitching Diodes

Electrical Characteristics

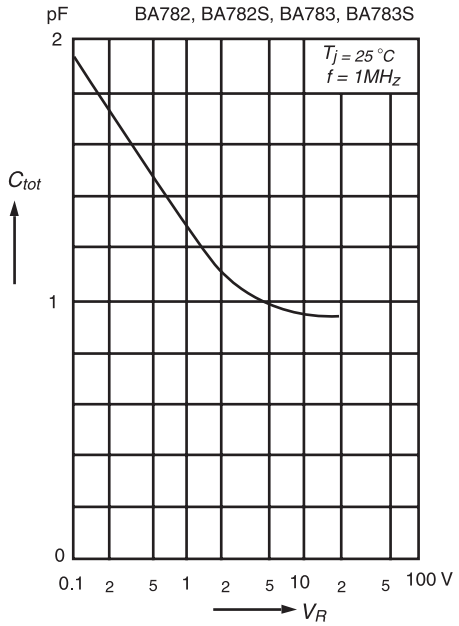
Ratings at 25°C ambient temperature unless otherwise specified.

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

Ratings and Characteristic Curves

(T_A = 25°C unless otherwise noted)

Capacitance versus reverse voltage



Dynamic forward resistance versus forward voltage