

# SILICON HYPERABRUPT VARACTOR DIODE

**DESCRIPTION:**

The **ASI AHV9001** is a Silicon Hyperabrupt Tuning Varactor Diode for VHF operation.

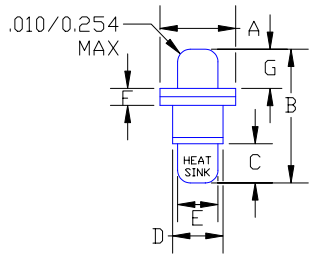
**FEATURES INCLUDE:**

- Octave tuning from 4 to 20 V
- Ultra high **Q**
- Linear frequency performance versus voltage

**MAXIMUM RATINGS**

<b>I<sub>F</sub></b>	50 mA
<b>V<sub>R</sub></b>	22 V
<b>P<sub>DISS</sub></b>	280 mW @ T <sub>C</sub> = 25 °C
<b>T<sub>J</sub></b>	-55 °C to +125 °C
<b>T<sub>STG</sub></b>	-55 °C to +125 °C

**PACKAGE STYLE 51**



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.118/2.997	.124/3.150
B	.205/5.207	.225/5.715
C	.060/1.524	.064/1.626
D	.077/1.956	.083/2.108
E	.060/1.524	.064/1.626
F		.027/0.686
G	.060/1.524	.064/1.626

C<sub>p</sub>=.18pF  
L<sub>p</sub>=1.0nH

**CHARACTERISTICS** T<sub>A</sub> = 25 °C

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS	
<b>V<sub>BR</sub></b>	I <sub>R</sub> = 10 μA	22			<b>V</b>	
<b>I<sub>R</sub></b>	V <sub>R</sub> = 20 V			0.10	<b>μA</b>	
<b>C<sub>t</sub></b>	V <sub>R</sub> = 4.0 V	f = 1.0 MHz	18	20	22	<b>pF</b>
<b>C<sub>t</sub></b>	V <sub>R</sub> = 8.0 V	f = 1.0 MHz	7.5	8.5	10.5	<b>pF</b>
<b>C<sub>t</sub></b>	V <sub>R</sub> = 20 V	f = 1.0 MHz	3.1	3.5	3.9	<b>pF</b>
<b>C<sub>T4</sub>/C<sub>T20</sub></b>		f = 1.0 MHz	5.4	6.0	6.6	<b>---</b>
<b>Q</b>	V <sub>R</sub> = 1.0 V	f = 1.0 MHz	220			<b>---</b>

**Notes:**

1. DO-7 glass package for HF, VHF and UHF hyperabrupts.
2. Style 51 ceramic package for MICROWAVE Hyperabrupts.