

# Silicon Abrupt Varactors: General Purpose



Glass Axial Leaded

## 1N5139 – 1N5148, 1N5139A – 1N5148A

Model	Capacitance pF			Capacitance Ratio	Quality Factor Q
	MIN	TYP	MAX	MIN	MIN
1N5139	6.12	6.8	7.48	2.7	350
® 1N5139A	6.46	6.8	7.14	2.7	350
1N5140	9.0	10.0	11.0	2.8	300
® 1N5140A	9.5	10.0	10.5	2.8	300
1N5141	10.8	12.0	13.2	2.8	300
® 1N5141A	11.4	12.0	12.6	2.8	300
1N5142	13.5	15.0	16.5	2.8	250
® 1N5142A	14.3	15.0	15.7	2.8	250
1N5143	16.2	18.0	19.8	2.8	250
® 1N5143A	17.1	18.0	18.9	2.8	250
1N5144	19.8	22.0	24.2	3.2	200
® 1N5144A	20.9	22.0	23.1	3.2	200
1N5145	24.3	27.0	29.7	3.2	200
® 1N5145A	25.7	27.0	28.3	3.2	200
1N5146	29.7	33.0	36.3	3.2	200
® 1N5146A	31.4	33.0	34.6	3.2	200
1N5147	6.1	39.0	42.9	3.2	200
® 1N5147A	37.1	39.0	40.9	3.2	200
1N5148	42.3	47.0	51.7	3.2	200
® 1N5148A	44.7	47.0	49.3	3.2	200
<b>Test Conditions</b>	@ -4 Vdc, 1 MHz			$C_T$ 2 V / $C_T$ 60 V	@ 4 Vdc F = 50 MHz

Maximum Ratings	Parameters	Value	Rating
	DC Power Dissipation	400 mW	
	Forward Current	250 mA	
	Min Reverse Breakdown Voltage	@ $I_R = 10 \mu\text{Adc}$	65 Vdc
	Max Reverse Current	@ $V_R = 55 \text{ Vdc}$	20 $\mu\text{Adc}$
	Max Reverse Current	@ $V_R = 55 \text{ Vdc}$ ; $T_a = 150^\circ \text{C}$	20 $\mu\text{Adc}$
	Temp Coefficient of Capacitance	@ $V_R = 4 \text{ Vdc}$ ; $T_a -40$ to $+85^\circ \text{C}$	03% / $^\circ \text{C}$
	Operating Temperature Range	$-65^\circ$ to $+175^\circ \text{C}$	
	Storage Temperature Range	$-65^\circ$ to $+200^\circ \text{C}$	
	Voltage Tolerance	Standard Device	+10%
	Suffix A	+5%	

® Denotes Military approval for JAN - JANTX - JANTXV