

New Jersey Semi-Conductor Products, Inc.

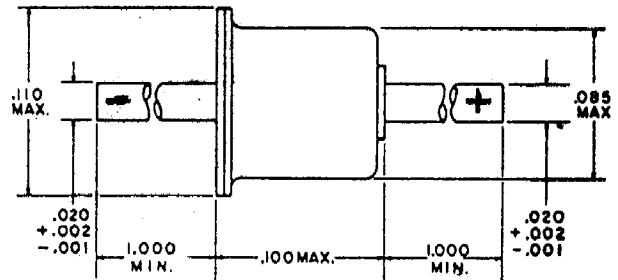
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1N3712-21

Germanium Diodes

AXIAL DIODE OUTLINE



ALL DIMENSIONS IN INCHES.
DIMENSIONS ARE REFERENCE UNLESS TOLERANCED.

1N3712 1N3714 1N3716 1N3718 1N3720
1N3713 1N3715 1N3717 1N3719 1N3721

Forward Current*	5	10	.25	50	100	ma
Reverse Current*	10	20	50	50	100	ma
Storage Temperature	← -55 to +100 →					°C
Lead Temperature $\frac{1}{16}'' \pm \frac{1}{32}''$ from case for 10 seconds	← 260 →					°C

*Derate maximum currents 1% per °C ambient temperature above 25°C.

electrical characteristics:

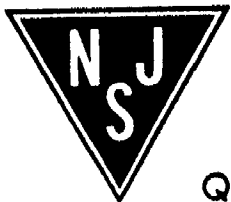
STATIC CHARACTERISTICS		1N3712			1N3713			1N3714			1N3715		
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.
Peak Point Current	I_P	0.9	1.0	1.1	0.975	1.000	1.025	2.0	2.2	2.4	2.15	2.20	2.25
Valley Point Current	I_V		0.12	0.18	.075	.095	.140	0.29	0.48	.165	.210	.310	
Peak Point Voltage	V_P		65		58	65	72	65		58	65	72	
Valley Point Voltage	V_V		350		315	355	395	350		315	355	395	
Reverse Voltage ($I_R = I_P$ typ.)	V_R			40		20	40			40		20	40
Forward Voltage ($I_V = I_P$ typ.)	V_{FR}		500		475	510	535	500		475	510	535	
	($I_F = .25 I_P$ typ.) V_{FS}^*				410	450					410	450	

DYNAMIC CHARACTERISTICS

Total Series Inductance	L_s		0.5		0.5		0.5		0.5			
Total Series Resistance	R_s		1.5	4.0	1.7	4.0	1.0	3.0	1.1	3.0		
Valley Point Terminal Capacitance	C		5	10	3.5	5.0	10	25	7.0	10.0		
Max. Negative Terminal Conductance	$-G$		8		7.5	8.5	9.5	18		16	19	22
Resistive Cutoff Frequency	f_{cr}		2.3		3.2		2.2		3.0			
Self-Resonant Frequency	f_{sr}		3.2		3.8		2.2		2.7			
Frequency of Oscillation	F_{osc}^{**}		3.2		3.8		2.2		2.7			
Rise Time	t_r^{***}				1.7				1.6			

* V_{FS} is defined as the value of forward voltage at a forward current of one quarter the typical peak current.

**The frequency of oscillation (under short circuit conditions) for steady state large signal sinusoidal oscillation is given by equation (3) which is the maximum frequency attainable without capacitance compensation.



Quality Semi-Conductors