

### HIGH-RELIABILITY PRODUCTS

#### Features

- Low dynamic impedance
- Hermetically sealed
- 5 Watt applications
- Low reverse leakage currents
- Thermal Resistance to end cap  $R_{\theta JEC} = 6 \text{ }^{\circ}\text{C/W}$

#### Specification

- Quick reference data

$V_R = 6.8\text{V} - 300\text{V}$   
 $I_z (\text{MAX}) = 15.6\text{mA} - 700\text{mA}$   
 $Z_z = 1\Omega - 950\Omega$   
 $I_R = 2\mu\text{A} - 150\mu\text{A}$

#### Description

These products are qualified to MIL-PRF-19500/356.  
 They can be supplied as JAN, JANTX, JANTXV and JANS grades.

#### Outline Drawing

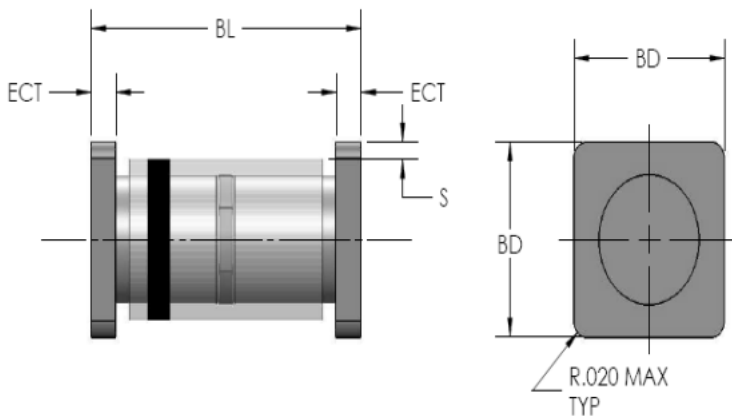


Figure 1: Outline Dimensions

Dimensions				
DIM	Inches		Millimeters	
	MIN	MAX	MIN	MAX
BL	0.200	0.225	5.08	5.72
ECT	0.019	0.028	0.48	0.72
S	0.003			0.08
BD	0.137	0.148	3.48	3.76

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

Device Types	V <sub>Z</sub> Nom	V <sub>Z</sub> Min	V <sub>Z</sub> Max	I <sub>Z</sub> Test Current T <sub>A</sub> =+25°C	Z <sub>Z</sub> Imped.	Z <sub>K</sub> Knee Imped.	I <sub>Z</sub> Max DC Current	V <sub>Z</sub> (reg) Voltage Reg.	I <sub>ZSM</sub> @ T <sub>A</sub> =+25°C	V <sub>R</sub> Reverse Voltage	I <sub>R</sub> Reverse Current DC	αV <sub>Z</sub> Temp Coeff.	I <sub>R</sub> Reverse Current DC T <sub>A</sub> =+150°C	I <sub>ZK</sub> Test current
	V	V	V	mA	Ω	Ω	mA	V	A	V	μA	%/°C	μA	mA
1N4954US	6.8	6.46	7.14	175	1	1000	700	0.7	29.3	5.2	150	0.05	750	1
1N4955US	7.5	7.13	7.87	175	1.5	800	630	0.7	26.4	5.7	100	0.06	500	1
1N4956US	8.2	7.79	8.61	150	1.5	600	580	0.7	24	6.2	50	0.06	300	1
1N4957US	9.1	8.65	9.55	150	2	400	520	0.7	22	6.9	25	0.06	200	1
1N4958US	10	9.5	10.5	125	2	125	475	0.8	20	7.6	25	0.07	200	1
1N4959US	11	10.45	11.55	125	2.5	130	430	0.8	19	8.4	10	0.07	150	1
1N4960US	12	11.4	12.6	100	2.5	140	395	0.8	18	9.1	10	0.07	150	1
1N4961US	13	12.35	13.65	100	3	145	365	0.9	16	9.9	10	0.08	150	1
1N4962US	15	14.25	15.75	75	3.5	150	315	1	12	11.4	5	0.08	100	1
1N4963US	16	15.2	16.8	75	3.5	155	294	1.1	10	12.2	5	0.08	100	1
1N4964US	18	17.1	18.9	65	4	160	264	1.2	9	13.7	5	0.085	100	1
1N4965US	20	19	21	65	4.5	165	237	1.5	8	15.2	2	0.085	100	1
1N4966US	22	20.9	23.1	50	5	170	216	1.8	7	16.7	2	0.085	100	1
1N4967US	24	22.8	25.2	50	5	175	198	2	6.5	18.2	2	0.09	100	1
1N4968US	27	25.7	28.3	50	6	180	176	2	6	20.6	2	0.09	100	1
1N4969US	30	28.5	31.5	40	8	190	158	2.5	5.5	22.8	2	0.09	100	1
1N4970US	33	31.4	34.6	40	10	200	144	2.8	5	25.1	2	0.095	100	1
1N4971US	36	34.2	37.8	30	11	220	132	3	4.5	27.4	2	0.095	100	1
1N4972US	39	37.1	40.9	30	14	230	122	3	4	29.7	2	0.095	100	1
1N4973US	43	40.9	45.1	30	20	240	110	3.3	3.5	32.7	2	0.095	100	1
1N4974US	47	44.7	49.3	25	25	250	100	3.5	3.2	35.8	2	0.095	100	1
1N4975US	51	48.5	53.5	25	27	270	92	4	3	38.8	2	0.095	100	1
1N4976US	56	53.2	58.8	20	35	320	84	4.4	2.8	42.6	2	0.095	100	1
1N4977US	62	58.9	65.1	20	42	400	76	5	2.5	47.1	2	0.1	100	1
1N4978US	68	64.6	71.4	20	50	500	70	5.5	2.2	51.7	2	0.1	100	1
1N4979US	75	71.3	78.7	20	55	620	63	6	2	56	2	0.1	100	1
1N4980US	82	77.9	86.1	15	80	720	58	6.6	1.8	62.2	2	0.1	100	1
1N4981US	91	86.5	95.5	15	90	760	52.5	7.5	1.6	69.2	2	0.1	100	1
1N4982US	100	95	105	12	110	800	47.5	8	1.4	76	2	0.1	100	1
1N4983US	110	104.5	115.5	12	125	1000	43	9	1.2	83.6	2	0.1	100	1
1N4984US	120	114	126	10	170	1150	39.5	10	1	91.2	2	0.1	100	1
1N4985US	130	123.5	136.5	10	190	1250	36.6	11	0.8	98.8	2	0.105	100	1
1N4986US	150	142.5	157.5	8	330	1500	31.6	13	0.75	114	2	0.105	100	1
1N4987US	160	152	168	8	350	1650	29.4	14	0.7	121.6	2	0.105	100	1
1N4988US	180	171	189	5	450	1750	26.4	16	0.6	136.8	2	0.11	100	1
1N4989US	200	190	210	5	500	1850	23.6	18	0.5	152	2	0.11	100	1

Device Types	V <sub>Z</sub> Nom	V <sub>Z</sub> Min	V <sub>Z</sub> Max	I <sub>Z</sub> Test Current T <sub>A</sub> =+25°C	Z <sub>Z</sub> Imped.	Z <sub>K</sub> Knee Imped.	I <sub>Z</sub> Max DC Current	V <sub>Z</sub> (reg) Voltage Reg.	I <sub>ZSM</sub> @ T <sub>A</sub> =+25°C	V <sub>R</sub> Reverse Voltage	I <sub>R</sub> Reverse Current DC	αV <sub>Z</sub> Temp Coeff.	I <sub>R</sub> Reverse Current DC T <sub>A</sub> =+150°C	I <sub>ZK</sub> Test current
	V	V	V	mA	Ω	Ω	mA	V	A	V	μA	%/°C	μA	mA
1N4990US	220	209	231	5	550	2000	21.6	19	0.5	167	2	0.115	100	1
1N4991US	240	228	252	5	650	2050	19.8	22	0.4	182	2	0.115	100	1
1N4992US	270	257	283	5	800	2100	17.5	25	0.35	206	2	0.12	100	1
1N4993US	300	285	315	4	950	2150	15.6	28	0.3	228	2	0.12	100	1

Notes:

(1): Operating Temperature: -55°C to 175°C

(2): Storage Temperature: -65°C to 175°C

## Ordering Information

Part Number	Description
1N4954US THRU 1N4993US	Hermetically sealed Surface Mount (US) <sup>(1)</sup>

Note:

(1): Available in bulk or tape and reel packaging. Please consult factory for quantities.



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