

1N5913B thru 1N5956B

T-11-15

*MAXIMUM RATINGS			
Rating	Symbol	Value	Unit
DC Power Dissipation @ $T_L = 75^\circ\text{C}$, Lead Length = 3/8"	P_D	1.5 12	Watts mW/°C
Derate above 75°C			

*ELECTRICAL CHARACTERISTICS ($T_L = 30^\circ\text{C}$ unless otherwise noted. $V_F = 1.5$ Volts Max @ $I_F = 200$ mAdc for all types.)								
Motorola Type Number (Note 1)	Nominal Zener Voltage $V_Z @ I_{ZT}$ Volts (Note 2 and 3)	Test Current I_{ZT} mA	Max. Zener Impedance (Note 4)			Max. Reverse Leakage Current		Maximum DC Zener Current I_{ZM} mAdc
			$Z_{ZT} @ I_{ZT}$ Ohms	$Z_{ZK} @ I_{ZK}$ Ohms	$I_R @ V_R$ μA Volts			
1N5913B	3.3	113.6	10	500	1	100	1	454
1N5914B	3.6	104.2	9	500	1	75	1	416
1N5915B	3.9	96.1	7.5	500	1	25	1	384
1N5916B	4.3	87.2	6	500	1	5	1	348
1N5917B	4.7	79.8	5	500	1	5	1.5	319
⇒ 1N5918B	5.1	73.5	4	350	1	5	2	294
1N5919B	5.6	66.9	2	250	1	5	3	267
⇒ 1N5920B	6.2	60.5	2	200	1	5	4	241
1N5921B	6.8	55.1	2.5	200	1	5	5.2	220
1N5922B	7.5	50	3	400	0.5	5	6	200
1N5923B	8.2	45.7	3.5	400	0.5	5	6.5	182
1N5924B	9.1	41.2	4	500	0.5	5	7	164
1N5925B	10	37.5	4.5	500	0.25	5	8	150
1N5926B	11	34.1	5.5	550	0.25	1	8.4	136
1N5927B	12	31.2	6.5	550	0.25	1	9.1	125
1N5928B	13	28.8	7	550	0.25	1	9.9	115
⇒ 1N5929B	15	25	9	600	0.25	1	11.4	100
1N5930B	16	23.4	10	600	0.25	1	12.2	93
1N5931B	18	20.8	12	650	0.25	1	13.7	83
1N5932B	20	18.7	14	650	0.25	1	15.2	75
1N5933B	22	17	17.5	650	0.25	1	16.7	68
⇒ 1N5934B	24	15.6	19	700	0.25	1	18.2	62
1N5935B	27	13.9	23	700	0.25	1	20.6	55
⇒ 1N5936B	30	12.5	26	750	0.25	1	22.8	50
1N5937B	33	11.4	33	800	0.25	1	25.1	45
1N5938B	36	10.4	38	850	0.25	1	27.4	41
1N5939B	39	9.6	45	900	0.25	1	29.7	38
1N5940B	43	8.7	53	950	0.25	1	32.7	34
⇒ 1N5941B	47	8	67	1000	0.25	1	35.8	31
1N5942B	51	7.3	70	1100	0.25	1	38.8	29
1N5943B	56	6.7	86	1300	0.25	1	42.6	26
1N5944B	62	6	100	1500	0.25	1	47.1	24
1N5945B	68	5.5	120	1700	0.25	1	51.7	22
1N5946B	75	5	140	2000	0.25	1	56	20
1N5947B	82	4.6	160	2500	0.25	1	62.2	18



(continued)

⇒ Preferred part

*Indicates JEDEC Registered Data.

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Motorola Type Number (Note 1)	Nominal Zener Voltage $V_Z @ I_{ZT}$ Volts (Note 2 and 3)	Test Current I_{ZT} mA	Max. Zener Impedance (Note 4)			Max. Reverse Leakage Current		Maximum DC Zener Current I_{ZM} mAdc
			$Z_{ZT} @ I_{ZT}$ Ohms	$Z_{ZK} @ I_{ZK}$ Ohms	I_{ZK} mA	$I_R @ V_R$ μA Volts		
*1N5948B	91	4.1	200	3000	0.25	1	69.2	16
1N5949B	100	3.7	250	3100	0.25	1	76	15
1N5950B	110	3.4	300	4000	0.25	1	83.6	13
1N5951B	120	3.1	380	4500	0.25	1	91.2	12
1N5952B	130	2.9	450	5000	0.25	1	98.8	11
1N5953B	150	2.5	600	6000	0.25	1	114	10
1N5954B	160	2.3	700	6500	0.25	1	121.6	9
1N5955B	180	2.1	900	7000	0.25	1	136.8	8
1N5956B	200	1.9	1200	8000	0.25	1	152	7

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NOTE 1. TOLERANCE AND VOLTAGE DESIGNATIONTolerance designation — Device tolerances of $\pm 5\%$ are indicated by a "B" suffix.**NOTE 2. SPECIAL SELECTIONS AVAILABLE INCLUDE:**Nominal zener voltages between those shown and $\pm 1\%$ and $\pm 2\%$ tight voltage tolerances. Consult factory.**NOTE 3. ZENER VOLTAGE (V_Z) MEASUREMENT**Motorola guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at $30^\circ\text{C} \pm 1^\circ\text{C}$, $3/8"$ from the diode body.**NOTE 4. ZENER IMPEDANCE (Z_Z) DERIVATION**The zener impedance is derived from the 60 cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK} .