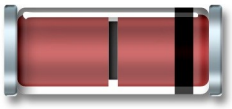
1N4678UR-1 thru 1N4717UR-1

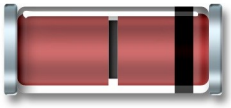
Low Noise Zener Diode Series

Rev. V1

Features

- 50 mA Low Operating Current
- Double Plug Construction
- Metallurgically Bonded
- Hermetically Sealed DO-213AA Package





Electrical Specifications: T_A = +25°C (unless otherwise specified)

TYPE NUMBER (Note 1)	NOMINAL ZENER VOLTAGE VZ	ZENER TEST CURRENT IZT	MAXIMUM VOLTAGE REGULATION ΔVZ (Note 2)	MAXIMUM REVERSE LEAKAGE CURRENT IR @ VR		MAXIMUM DC ZENER CURRENT IZM
	VOLTS	µA	VOLTS	µA	VOLTS	mA
1N4678UR-1	1.8	50.0	0.70	7.5	1.0	120.0
1N4679UR-1	2.0	50.0	0.70	5.0	1.0	110.0
1N4680UR-1	2.2	50.0	0.80	4.0	1.0	100.0
1N4681UR-1	2.4	50.0	0.80	2.0	1.0	95.0
1N4682UR-1	2.7	50.0	0.85	1.0	1.0	90.0
1N4683UR-1	3.0	50.0	0.90	0.8	1.0	85.0
1N4684UR-1	3.3	50.0	0.95	7.5	1.5	80.0
1N4685UR-1	3.6	50.0	0.95	7.5	2.0	75.0
1N4686UR-1	3.9	50.0	0.97	5.0	2.0	70.0
1N4687UR-1	4.3	50.0	0.99	4.0	2.0	65.0
1N4688UR-1	4.7	50.0	0.99	10.0	3.0	60.0
1N4689UR-1	5.1	50.0	0.97	10.0	3.0	55.0
1N4690UR-1	5.6	50.0	0.96	10.0	4.0	50.0
1N4691UR-1	6.2	50.0	0.95	10.0	5.0	45.0
1N4692UR-1	6.8	50.0	0.90	10.0	5.1	35.0
1N4693UR-1	7.5	50.0	0.75	10.0	5.7	31.8
1N4694UR-1	8.2	50.0	0.50	1.0	6.2	29.0
1N4695UR-1	8.7	50.0	0.10	1.0	6.6	27.4
1N4696UR-1	9.1	50.0	0.08	1.0	6.9	26.2
1N4697UR-1	10.0	50.0	0.10	1.0	7.6	24.8
1N4698UR-1	11.0	50.0	0.11	0.05	8.4	21.6
1N4699UR-1	12.0	50.0	0.12	0.05	9.1	20.4

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TYPE NUMBER (Note 1)	NOMINAL ZENER VOLTAGE VZ	ZENER TEST CURRENT IZT	MAXIMUM VOLTAGE REGULATION ΔVZ (Note 2)	MAXIMUM REVERSE LEAKAGE CURRENT IR @ VR		MAXIMUM DC ZENER CURRENT IZM
	VOLTS	µA	VOLTS	µA	VOLTS	mA
1N4700UR-1	13.0	50.0	0.13	0.05	9.8	19.0
1N4701UR-1	14.0	50.0	0.14	0.05	10.6	17.5
1N4702UR-1	15.0	50.0	0.15	0.05	11.4	16.3
1N4703UR-1	16.0	50.0	0.16	0.05	12.1	15.4
1N4704UR-1	17.0	50.0	0.17	0.05	12.9	14.5
1N4705UR-1	18.0	50.0	0.18	0.05	13.6	13.2
1N4706UR-1	19.0	50.0	0.19	0.05	14.4	12.5
1N4707UR-1	20.0	50.0	0.20	0.01	15.2	11.9
1N4708UR-1	22.0	50.0	0.22	0.01	16.7	10.8
1N4709UR-1	24.0	50.0	0.24	0.01	18.2	9.9
1N4710UR-1	25.0	50.0	0.25	0.01	19.0	9.5
1N4711UR-1	27.0	50.0	0.27	0.01	20.4	8.8
1N4712UR-1	28.0	50.0	0.28	0.01	21.2	8.5
1N4713UR-1	30.0	50.0	0.30	0.01	22.8	7.9
1N4714UR-1	33.0	50.0	0.33	0.01	25.0	7.2
1N4715UR-1	36.0	50.0	0.36	0.01	27.3	6.6
1N4716UR-1	39.0	50.0	0.39	0.01	29.6	6.1
1N4717UR-1	43.0	50.0	0.43	0.01	32.6	5.5

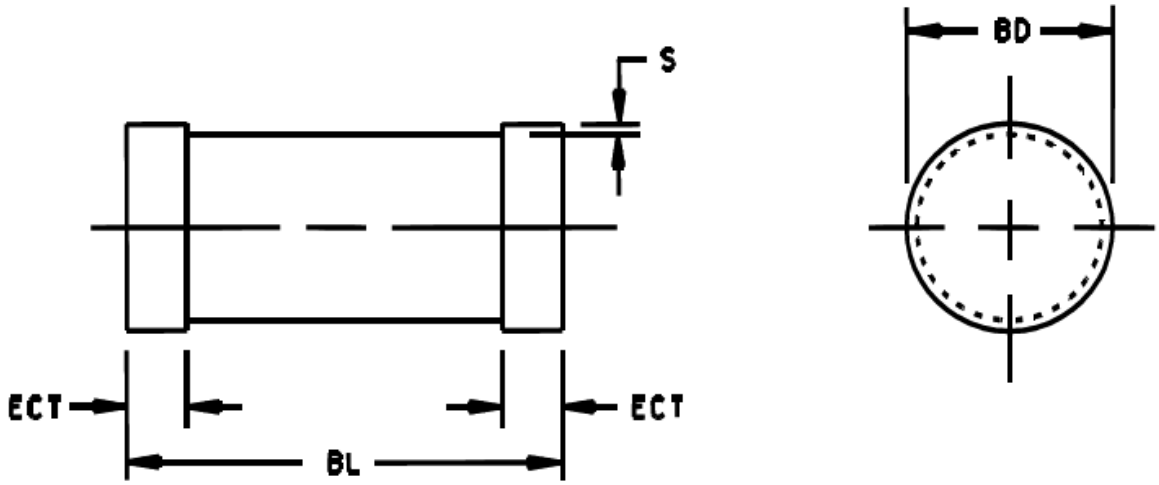
1. The JEDEC type numbers shown above have a standard tolerance of +5 % of the nominal Zener volume. VZ is measured with the diode in thermal equilibrium at 25°C + 3°C.
2. Vz @ 100 µA minus Vz @ 10 µA.

Absolute Maximum Ratings

Parameter	Symbol	Absolute Maximum
Steady State Power Dissipation (3)	P_D	500 mW @ +50°C
Forward Voltage	V_F	1.1 V @ 200 mA
DC Power Derating		4 mW / °C above +50°C
Junction & Storage Temperature	T_J, T_{STG}	-65°C to +175°C
Thermal Resistance Junction to End Cap (4)	$R_{\theta JEC}$	100°C/W
Thermal Resistance Junction to Ambient (4)	$R_{\theta JA}$	250°C/W
Solder Temperature @ 10 s	T_{SP}	260°C/W

3. At $T_{EC} \leq 125^{\circ}C$ or at ambient $T_A \leq 50^{\circ}C$ when mounted on FR4 PC board.
4. When mounted on FR4 PC board (1 oz Cu) with recommended footprint.

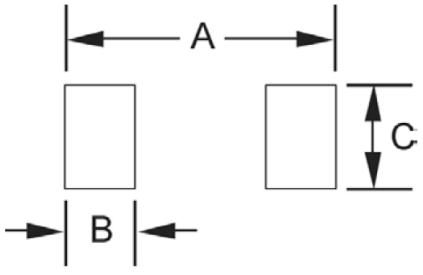
Outline Drawing (DO-213AA)



Symbol	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	.063	.067	1.60	1.70
ECT	.016	.022	0.41	0.56
BL	.130	.146	3.30	3.71
S	.001 min		0.03 min	

NOTES:
1. Dimensions are in inches.
2. Millimeter equivalents are given for general information only.
3. In accordance with ASME Y14.5M, diameters are equivalent to Φx symbology.

Pad Layout



	inch	mm
A	.200	5.08
B	.055	1.40
C	.080	2.03