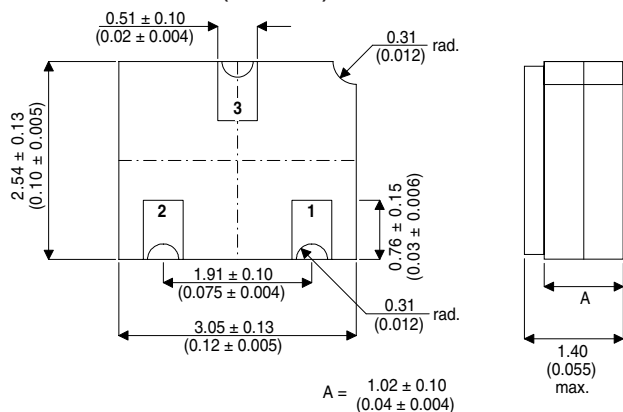


## MECHANICAL DATA

Dimensions in mm(inches)



### LCC1 PACKAGE

#### Underside View

Pad 1 – Anode      Pad 2 – N/C      Pad 3 – Cathode

## VOLTAGE REGULATOR DIODE IN A CERAMIC SURFACE MOUNT PACKAGE FOR HI-REL APPLICATIONS

### FEATURES

- HERMETIC CERAMIC SURFACE MOUNT PACKAGE (SOT23 COMPATIBLE)
- VOLTAGE RANGE 2.4 TO 75V

## ABSOLUTE MAXIMUM RATINGS

Parameter	Description	Conditions	Value
$P_{TOT}$	Power Dissipation	$T_{MB} = 25^\circ\text{C}$	500mW
	Derate above $25^\circ\text{C}$		4mW/ $^\circ\text{C}$
$T_{OP}$	Maximum Operating Ambient Temperature		$-55$ to $+150^\circ\text{C}$
$T_{STG}$	Storage Temperature Range		$-65$ to $+175^\circ\text{C}$
$T_{SOL}$	Soldering Temperature	(5 seconds max.)	$260^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient		$336^\circ\text{C/W}$
$R_{\theta J-MB}$	Thermal Resistance Junction to Mounting Base		$140^\circ\text{C/W}$

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Units
$V_Z$ Zener Voltage	For $V_Z$ nom. $\leq 36\text{V}$ , $I_Z = 5\text{mA}$	$V_Z$ min.	$V_Z$ nom.	$V_Z$ max.	V
	For $V_Z$ nom. $\geq 39\text{V}$ , $I_Z = 2.5\text{mA}$				
$I_R$ Reverse Current	$V_R = V_R$ test			$I_R$ max.	$\mu\text{A}$
	$V_R = V_R$ test $T_{AMB} = 150^\circ\text{C}$			$I_R$ max <sup>(2)</sup>	
$Z_Z$ Small Signal Breakdown Impedance	$I_Z = I_Z$ test			$Z_Z$ max.	$\Omega$
$Z_K$ Small Signal Breakdown Impedance near breakdown knee	For $V_Z$ nom. $\leq 36\text{V}$ , $I_{ZK} = 1.0\text{mA}$			$Z_K$ max.	$\Omega$
	For $V_Z$ nom. $\geq 39\text{V}$ , $I_{ZK} = 0.5\text{mA}$				

See table 1 for type variants and test parameters.

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

## TABLE 1 – TYPE VARIANTS & TEST PARAMETERS

Product	$V_Z$ nom.	$V_Z$ min.	$V_Z$ max.	$I_Z$ max.	$Z_Z$ max.	$V_R$ test	$I_R$ max.	$T_{CVZ}$		$Z_K$ max.	$I_R$ max <sup>(2)</sup>
	(V)	(V)	(V)	(mA)	( $\Omega$ )	(V)	( $\mu$ A)	min. (%/°C)	max. (%/°C)	( $\Omega$ )	( $\mu$ A)
BZX55C2V4	2.4	2.28	2.56	155	100	1.0	50.0	-0.08	-0.06	600	100
BZX55C2V7	2.7	2.5	2.9	135	100	1.0	20.0	-0.08	-0.06	600	50
BZX55C3V0	3.0	2.8	3.2	125	100	1.0	4.00	-0.08	-0.06	600	40
BZX55C3V3	3.3	3.1	3.5	115	100	1.0	3.00	-0.08	-0.05	600	40
BZX55C3V6	3.6	3.4	3.8	105	100	1.0	2.00	-0.08	-0.04	600	40
BZX55C3V9	3.9	3.7	4.1	95	100	1.0	2.00	-0.07	-0.03	600	40
BZX55C4V3	4.3	4.0	4.6	90	75	1.0	1.00	-0.04	-0.01	600	20
BZX55C4V7	4.7	4.4	5.0	85	75	1.0	0.50	-0.03	+0.01	600	10
BZX55C5V1	5.1	4.8	5.4	80	40	1.0	0.15	-0.02	+0.05	550	2.0
BZX55C5V6	5.6	5.2	6.0	70	40	1.0	0.15	-0.01	+0.06	450	2.0
BZX55C6V2	6.2	5.8	6.6	64	10	2.0	0.15	0	+0.07	200	2.0
BZX55C6V8	6.8	6.4	7.2	58	8.0	3.0	0.15	+0.01	+0.08	150	2.0
BZX55C7V5	7.5	7.0	7.9	53	7.0	5.0	0.15	+0.01	+0.09	50	2.0
BZX55C8V2	8.2	7.7	8.7	47	7.0	6.2	0.15	+0.01	+0.09	50	2.0
BZX55C9V1	9.1	8.5	9.6	43	10	6.8	0.15	+0.02	+0.10	50	2.0
BZX55C10	10	9.4	10.6	40	15	7.5	0.15	+0.03	+0.11	70	2.0
BZX55C11	11	10.4	11.6	36	20	8.2	0.15	+0.03	+0.11	70	2.0
BZX55C12	12	11.4	12.7	32	20	9.1	0.15	+0.03	+0.11	90	2.0
BZX55C13	13	12.4	14.1	29	26	10	0.15	+0.03	+0.11	110	2.0
BZX55C15	15	13.8	15.6	27	30	11	0.15	+0.03	+0.11	110	2.0
BZX55C16	16	15.3	17.1	24	40	12	0.15	+0.03	+0.11	170	2.0
BZX55C18	18	16.8	19.1	21	50	13	0.15	+0.03	+0.11	170	2.0
BZX55C20	20	18.8	21.2	20	55	15	0.15	+0.03	+0.11	220	2.0
BZX55C22	22	20.8	23.3	18	55	16	0.15	+0.03	+0.11	220	2.0
BZX55C24	24	22.8	25.6	16	80	18	0.15	+0.04	+0.12	220	2.0
BZX55C27	27	25.1	28.9	14	80	20	0.15	+0.04	+0.12	220	2.0
BZX55C30	30	28	32	13	80	22	0.15	+0.04	+0.12	220	2.0
BZX55C33	33	31	35	12	80	24	0.15	+0.04	+0.12	220	2.0
BZX55C36	36	34	38	11	80	27	0.15	+0.04	+0.12	220	2.0
BZX55C39	39	37	41	10	90	30	0.15	+0.04	+0.12	500	5.0
BZX55C43	43	40	46	9.2	90	33	0.15	+0.04	+0.12	600	5.0
BZX55C47	47	44	50	8.5	110	36	0.15	+0.04	+0.12	700	5.0
BZX55C51	51	48	54	7.8	125	39	0.15	+0.04	+0.12	700	10
BZX55C56	56	52	60	7.0	135	43	0.15	+0.04	+0.12	1000	10
BZX55C62	62	58	66	6.4	150	47	0.15	+0.04	+0.12	1000	10
BZX55C68	68	64	72	5.9	200	51	0.15	+0.04	+0.12	1000	10
BZX55C75	75	70	80	5.3	250	56	0.15	+0.04	+0.12	1500	10

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