



**Micro Commercial Components**

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# LSH2 Series THRU LSH36 Series

**500 mW  
Zener Diode  
1.9 to 37.2 Volts**

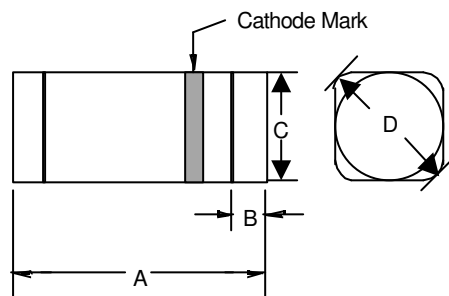
## Features

- Low Leakage
- Low Zener Impedance
- High Reliability

## Maximum Ratings

Symbol	Rating	Rating	Unit
$P_b$	Power dissipation	500	W
$T_j$	Junction Temperature	-55 to +175	$^{\circ}C$
$T_{STG}$	Storage Temperature Range	-55 to +175	$^{\circ}C$

## Quadro MELF



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.130	.146	3.30	3.70	
B	.008	.016	.20	.40	
C	.055	.063	1.40	1.60	∅
D	.067		1.70		

## SUGGESTED SOLDER PAD LAYOUT

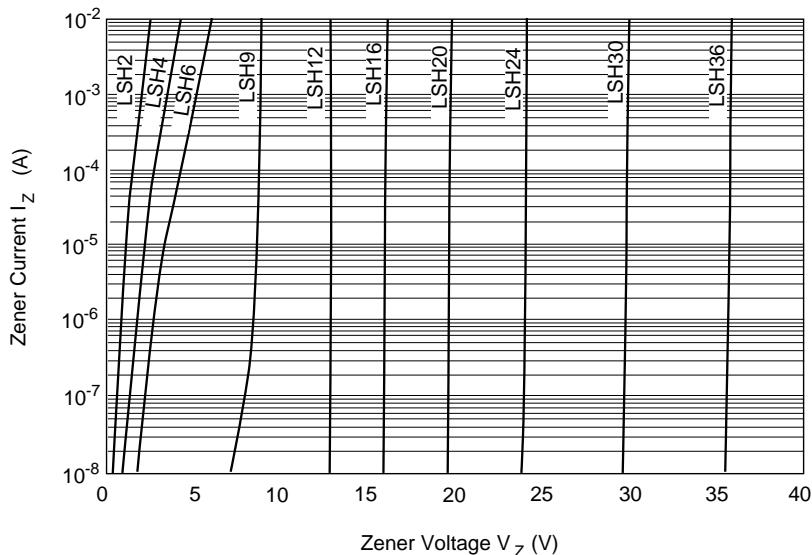
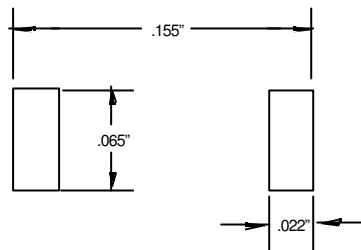


Fig.1 Zener current Vs. Zener voltage

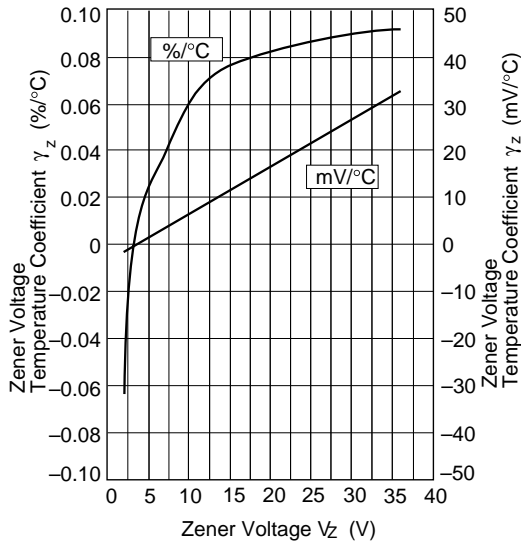


Fig.2 Temperature Coefficient Vs. Zener voltage

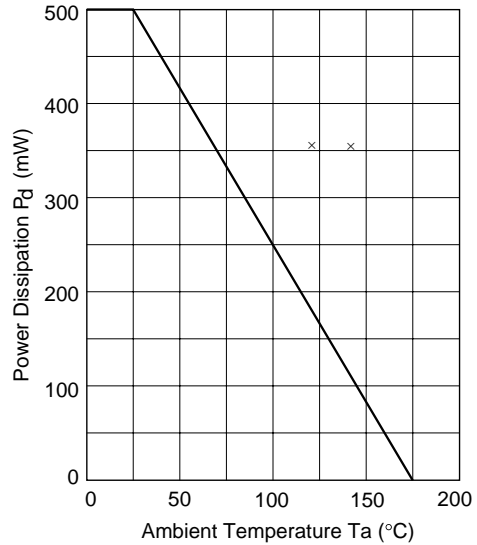


Fig.3 Power Dissipation Vs. Ambient Temperature

**ELECTRICAL CHARACTERISTICS @25 °C**

MCC PART NUMBER		ZENER VOLTAGE $V_z @ I_{zT}$ VOLTS		TEST CURRENT $I_{zT}$	Dynamic Resistance $r_d$ (Max) $I_z$		REVERSE CURRENT $I_R$ (Max) @ $V_R$	
Type	Grade	Min	Max	mA	OHMS	mA	$\mu$ A	VOLTS
LSH2	A3	1.8	2.0	5.0	100	5.0	25	0.5
	B1	1.9	2.1	5.0	100	5.0	5.0	0.5
	B2	2.0	2.2	5.0	100	5.0	5.0	0.5
	B3	2.1	2.3	5.0	100	5.0	5.0	0.5
	C1	2.2	2.4	5.0	100	5.0	5.0	0.5
	C2	2.3	2.5	5.0	100	5.0	5.0	0.5
LSH3	A1	2.5	2.7	5.0	100	5.0	5.0	0.5
	A2	2.6	2.8	5.0	100	5.0	5.0	0.5
	A3	2.7	2.9	5.0	100	5.0	5.0	0.5
	B1	2.8	3.0	5.0	100	5.0	5.0	0.5
	B2	2.9	3.1	5.0	100	5.0	5.0	0.5
	B3	3.0	3.2	5.0	100	5.0	5.0	0.5
LSH4	C1	3.1	3.3	5.0	100	5.0	5.0	0.5
	C2	3.2	3.4	5.0	100	5.0	5.0	0.5
	C3	3.3	3.5	5.0	100	5.0	5.0	0.5
	A1	3.4	3.6	5.0	100	5.0	5.0	1.0
	A2	3.5	3.7	5.0	100	5.0	5.0	1.0
	A3	3.6	3.8	5.0	100	5.0	5.0	1.0
	B1	3.7	3.9	5.0	100	5.0	5.0	1.0
	B2	3.8	4.0	5.0	100	5.0	5.0	1.0
LSH4	B3	3.9	4.1	5.0	100	5.0	5.0	1.0
	C1	4.0	4.2	5.0	100	5.0	5.0	1.0
	C2	4.1	4.3	5.0	100	5.0	5.0	1.0

LSH2 Series thru LSH36 Series

**ELECTRICAL CHARACTERISTICS @25°C**

MCC PART NUMBER		ZENER VOLTAGE $V_Z @ I_{ZT}$ VOLTS		TEST CURRENT $I_{ZT}$	Dynamic Resistance $r_d$ (Max) $I_Z$		REVERSE CURRENT $I_R$ (Max)    @ $V_R$	
Type	Grade	Min	Max	mA	OHMS	mA	μA	VOLTS
LSH5	A1	4.3	4.5	5.0	100	5.0	5.0	1.5
	A2	4.4	4.6	5.0	100	5.0	5.0	1.5
	A3	4.5	4.7	5.0	100	5.0	5.0	1.5
	B1	4.6	4.8	5.0	100	5.0	5.0	1.5
	B2	4.7	4.9	5.0	100	5.0	5.0	1.5
	B3	4.8	5.0	5.0	100	5.0	5.0	1.5
	C1	4.9	5.1	5.0	100	5.0	5.0	1.5
	C2	5.0	5.2	5.0	100	5.0	5.0	1.5
	C3	5.1	5.3	5.0	100	5.0	5.0	1.5
LSH6	A1	5.2	5.5	5.0	40	5.0	5.0	2.0
	A2	5.3	5.6	5.0	40	5.0	5.0	2.0
	A3	5.4	5.7	5.0	40	5.0	5.0	2.0
	B1	5.5	5.8	5.0	40	5.0	5.0	2.0
	B2	5.6	5.9	5.0	40	5.0	5.0	2.0
	B3	5.7	6.0	5.0	40	5.0	5.0	2.0
	C1	5.8	6.1	5.0	40	5.0	5.0	2.0
	C2	6.0	6.3	5.0	40	5.0	5.0	2.0
	C3	6.1	6.4	5.0	40	5.0	5.0	2.0
LSH7	A1	6.3	6.6	5.0	15	5.0	1.0	3.5
	A2	6.4	6.7	5.0	15	5.0	1.0	3.5
	A3	6.6	6.9	5.0	15	5.0	1.0	3.5
	B1	6.7	7.0	5.0	15	5.0	1.0	3.5
	B2	6.9	7.2	5.0	15	5.0	1.0	3.5
	B3	7.0	7.3	5.0	15	5.0	1.0	3.5
	C1	7.2	7.6	5.0	15	5.0	1.0	3.5
	C2	7.3	7.7	5.0	15	5.0	1.0	3.5
	C3	7.5	7.9	5.0	15	5.0	1.0	3.5
LSH9	A1	7.7	8.1	5.0	20	5.0	1.0	5.0
	A2	7.9	8.3	5.0	20	5.0	1.0	5.0
	A3	8.1	8.5	5.0	20	5.0	1.0	5.0
	B1	8.3	8.7	5.0	20	5.0	1.0	5.0
	B2	8.5	8.9	5.0	20	5.0	1.0	5.0
	B3	8.7	9.1	5.0	20	5.0	1.0	5.0
	C1	8.9	9.3	5.0	20	5.0	1.0	5.0
	C2	9.1	9.5	5.0	20	5.0	1.0	5.0
	C3	9.3	9.7	5.0	20	5.0	1.0	5.0
LSH11	A1	9.5	9.9	5.0	25	5.0	1.0	7.5
	A2	9.7	10.1	5.0	25	5.0	1.0	7.5
	A3	9.9	10.3	5.0	25	5.0	1.0	7.5
	B1	10.2	10.6	5.0	25	5.0	1.0	7.5
	B2	10.4	10.8	5.0	25	5.0	1.0	7.5
	B3	10.7	11.1	5.0	25	5.0	1.0	7.5
	C1	10.9	11.3	5.0	25	5.0	1.0	7.5
	C2	11.1	11.6	5.0	25	5.0	1.0	7.5
	C3	11.4	11.9	5.0	25	5.0	1.0	7.5
LSH12	A1	11.6	12.1	5.0	35	5.0	1.0	9.5
	A2	11.9	12.4	5.0	35	5.0	1.0	9.5
	A3	12.2	12.7	5.0	35	5.0	1.0	9.5
	B1	12.4	12.9	5.0	35	5.0	1.0	9.5
	B2	12.6	13.1	5.0	35	5.0	1.0	9.5
	B3	12.9	13.4	5.0	35	5.0	1.0	9.5
	C1	13.2	13.7	5.0	35	5.0	1.0	9.5
	C2	13.5	14.0	5.0	35	5.0	1.0	9.5
	C3	13.8	14.3	5.0	35	5.0	1.0	9.5
LSH15	1	14.1	14.7	5.0	40	5.0	1.0	11
	2	14.5	15.1	5.0	40	5.0	1.0	11
	3	14.9	15.5	5.0	40	5.0	1.0	11
LSH16	1	15.3	15.9	5.0	45	5.0	1.0	12
	2	15.7	16.5	5.0	45	5.0	1.0	12
	3	16.3	17.1	5.0	45	5.0	1.0	12
LSH18	1	16.9	17.7	5.0	55	5.0	1.0	13
	2	17.5	18.3	5.0	55	5.0	1.0	13
	3	18.1	19.0	5.0	55	5.0	1.0	13
LSH20	1	18.8	19.7	2.0	60	2.0	1.0	15
	2	19.5	20.4	2.0	60	2.0	1.0	15
	3	20.2	21.1	2.0	60	2.0	1.0	15

LSH2 Series thru LSH36 Series

**ELECTRICAL CHARACTERISTICS @25 °C**

MCC PART NUMBER		ZENER VOLTAGE $V_Z @ I_{ZT}$ VOLTS		TEST CURRENT $I_{ZT}$	Dynamic Resistance $r_d(\text{Max})$ $I_Z$		REVERSE CURRENT $I_R(\text{Max})$ @ $V_R$	
Type	Grade	Min	Max	mA	OHMS	mA	$\mu\text{A}$	VOLTS
LSH22	1	20.9	21.9	2.0	65	2.0	1.0	17
	2	21.6	22.6	2.0	65	2.0	1.0	17
	3	22.3	23.3	2.0	65	2.0	1.0	17
LSH24	1	22.9	24.0	2.0	70	2.0	1.0	19
	2	23.6	24.7	2.0	70	2.0	1.0	19
	3	24.3	25.5	2.0	70	2.0	1.0	19
LSH27	1	25.2	26.6	2.0	80	2.0	1.0	21.0
	2	26.2	27.6	2.0	80	2.0	1.0	21.0
	3	27.2	28.6	2.0	80	2.0	1.0	21.0
LSH30	1	28.2	29.6	2.0	100	2.0	1.0	23.0
	2	29.2	30.6	2.0	100	2.0	1.0	23.0
	3	30.2	31.6	2.0	100	2.0	1.0	23.0
LSH33	1	31.2	32.6	2.0	120	2.0	1.0	25.0
	2	32.2	33.6	2.0	120	2.0	1.0	25.0
	3	33.2	34.6	2.0	120	2.0	1.0	25.0
LSH36	1	34.2	35.7	2.0	140	2.0	1.0	27.0
	2	35.3	36.8	2.0	140	2.0	1.0	27.0
	3	36.4	38.0	2.0	140	2.0	1.0	27.0



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