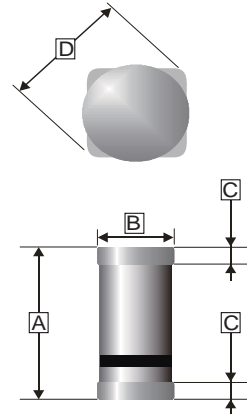


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

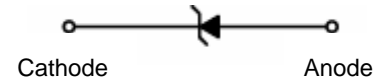
**FEATURES**

- Zener Voltage Range 2.2 to 39 Volts
- QUADRO Mini-MELF Package
- Surface Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All External Surfaces Are Corrosion Resistant And Terminals are Readily Solderable
- Matte Tin (Sn) Terminal Finish
- Color band Indicates Negative Polarity

**QUADRO Mini-MELF**



REF.	Millimeter	
	Min.	Max.
A	3.30	3.70
B	1.40	1.60
C	0.35	0.45
D	1.8 Typ.	



**ABSOLUTE MAXIMUM RATINGS** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

Parameter	Symbol	Value	Units
Power Dissipation	$P_D$	500	mW
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	175, -65~175	$^{\circ}\text{C}$

\*These ratings are limiting values above which the serviceability of the diode may be impaired.

**ELECTRICAL RATINGS** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

Device Type	Tolerance	$V_Z @ I_{ZT}$ (Volts)		$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$Z_{ZK} @ I_{ZK}$ ( $\Omega$ ) Max	$I_{ZK}$ (mA)	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		$V_Z$ (Min)	$V_Z$ (Max)						
VLZ2V2	A	2.12	2.30	20	35	400	1	55	0.7
	B	2.22	2.41						
VLZ2V4	A	2.33	2.52	20	35	400	1	84	1
	B	2.43	2.63						
VLZ2V7	A	2.54	2.75	20	35	450	1	70	1
	B	2.69	2.91						
VLZ3V0	A	2.85	3.07	20	35	450	1	35	1
	B	3.01	3.22						
VLZ3V3	A	3.16	3.38	20	35	450	1	14	1
	B	3.32	3.53						
VLZ3V6	A	3.46	3.70	20	48	850	1	2.8	1
	B	3.60	3.85						
VLZ3V9	A	3.74	4.01	20	40	850	1	1.4	1
	B	3.89	4.16						
VLZ4V3	A	4.04	4.29	20	32	850	1	0.47	1
	B	4.17	4.43						
	C	4.30	4.57						
VLZ4V7	A	4.44	4.68	20	21	770	1	0.19	1
	B	4.55	4.80						
	C	4.68	4.93						
VLZ5V1	A	4.81	5.07	20	17	685	1	0.19	1.5
	B	4.94	5.20						
	C	5.09	5.37						
VLZ5V6	A	5.28	5.55	20	10.5	425	1	0.75	2.5
	B	5.45	5.73						
	C	5.61	5.91						
VLZ6V2	A	5.78	6.09	20	8.5	255	1	3.30	3.0
	B	5.96	6.27						
	C	6.12	6.44						
VLZ6V8	A	6.29	6.63	20	6.6	123	0.5	1.10	3.5
	B	6.49	6.83						
	C	6.66	7.01						
VLZ7V5	A	6.85	7.22	20	6.6	95	0.5	0.30	4.0
	B	7.07	7.45						
	C	7.29	7.67						
VLZ8V2	A	7.53	7.92	20	6.6	95	0.5	0.30	5.0
	B	7.78	8.19						
	C	8.03	8.45						
VLZ9V1	A	8.29	8.73	20	6.6	95	0.5	0.30	6.0
	B	8.57	9.01						
	C	8.83	9.30						
VLZ10V	A	9.12	9.59	20	6.6	95	0.5	0.11	7.0
	B	9.41	9.90						
	C	9.70	10.2						
VLZ11V	A	10.18	10.71	10	8.5	95	0.5	0.133	8.0
	B	10.50	11.05						
	C	10.82	11.38						

Device Type	Tolerance	V <sub>Z</sub> @ I <sub>ZT</sub> (Volts)		I <sub>ZT</sub> (mA)	Z <sub>ZT</sub> @ I <sub>ZT</sub> (Ω) Max	I <sub>ZK</sub> (mA)	Z <sub>ZK</sub> @ I <sub>ZK</sub> (Ω) Max	I <sub>R</sub> @ V <sub>R</sub> (μA) Max	V <sub>R</sub> (Volts)
		V <sub>Z</sub> (Min)	V <sub>Z</sub> (Max)						
VLZ12V	A	11.13	11.71	10	9.5	95	0.5	0.133	9.0
	B	11.44	12.03						
	C	11.74	12.35						
VLZ13V	A	12.11	12.75	10	11.4	95	0.5	0.133	10
	B	12.55	13.21						
	C	12.99	13.66						
VLZ15V	A	13.44	14.13	10	13.3	95	0.5	0.133	11
	B	13.89	14.62						
	C	14.35	15.09						
VLZ16V	A	14.80	15.57	10	15.2	132	0.5	0.133	12
	B	15.25	16.04						
	C	15.69	16.51						
VLZ18V	A	16.22	17.06	10	19.4	123	0.5	0.133	13
	B	16.82	17.70						
	C	17.42	18.33						
VLZ20V	A	18.02	18.96	10	23.5	170	0.5	0.133	15
	B	18.63	19.59						
	C	19.23	20.22						
	D	19.72	20.72						
VLZ22V	A	20.15	21.2	5	25.6	170	0.5	0.133	17
	B	20.64	21.71						
	C	21.08	22.17						
	D	21.52	22.63						
VLZ24V	A	22.05	23.18	5	29.0	170	0.5	0.133	19
	B	22.61	23.77						
	C	23.12	24.31						
	D	23.63	24.85						
VLZ27V	A	24.26	25.52	5	38.0	210	0.5	0.133	21
	B	24.97	26.26						
	C	25.63	26.95						
	D	26.29	27.64						
VLZ30V	A	26.99	28.39	5	46.0	210	0.5	0.133	23
	B	27.70	29.13						
	C	28.36	29.82						
	D	29.02	30.51						
VLZ33V	A	29.68	31.22	5	55.0	210	0.5	0.133	25
	B	30.32	31.88						
	C	30.90	32.50						
	D	31.49	33.11						
VLZ36V	A	32.14	33.79	5	63.0	210	0.5	0.133	27
	B	32.79	34.49						
	C	33.40	35.13						
	D	34.01	35.77						
VLZ39V	A	34.68	36.47	5	72.0	210	0.5	0.133	30
	B	35.36	37.19						
	C	36.00	37.85						
	D	36.63	38.52						

**Notes:**

**1. TOLERANCE AND VOLTAGE DESIGNATION**

The type numbers listed have zener voltage as shown.

**2. SPECIALS AVAILABLE INCLUDE**

Nominal zener voltages between the voltages shown and tighter voltage, for detailed information on price, availability and delivery, contact you nearest SeCoS representative.

**3. ZENER VOLTAGE ( $V_z$ ) MEASUREMENT**

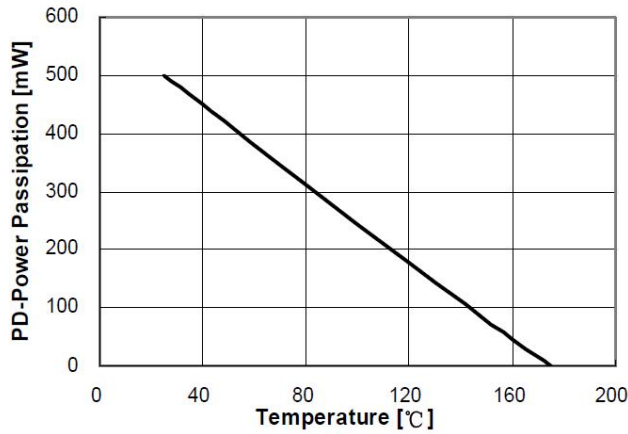
The zener voltage is measured under pulse conditions such that  $T_j$  is no more than  $2^\circ\text{C}$  above  $T_A$ .

**4. ZENER IMPEDANCE ( $Z_z$ ) DERIVATION**

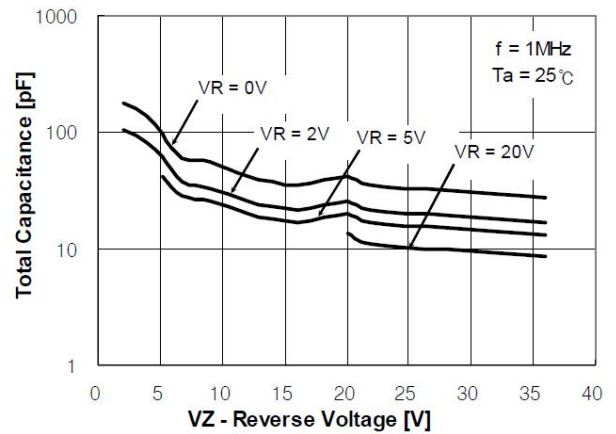
Zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an RMS value equal to 10% of the dc zener current ( $I_{zT}$ ) is superimposed to  $I_{zT}$

**5. WHEN ORDERING, PLEASE SPECIFY TOLERANCE A, B, C OR D**

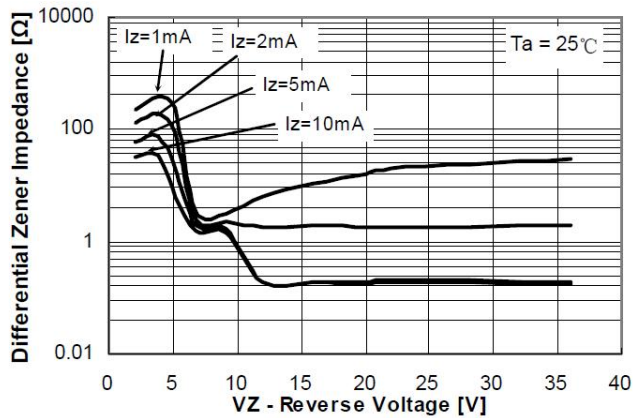
**RATINGS AND CHARACTERISTIC CURVES**



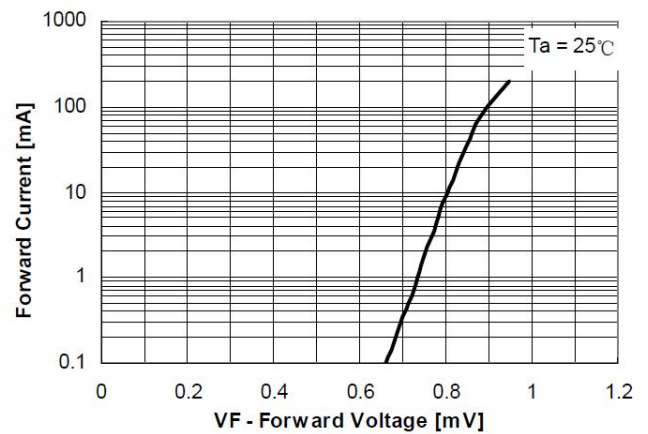
**Figure 1. Power Dissipation vs Ambient Temperature**  
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature



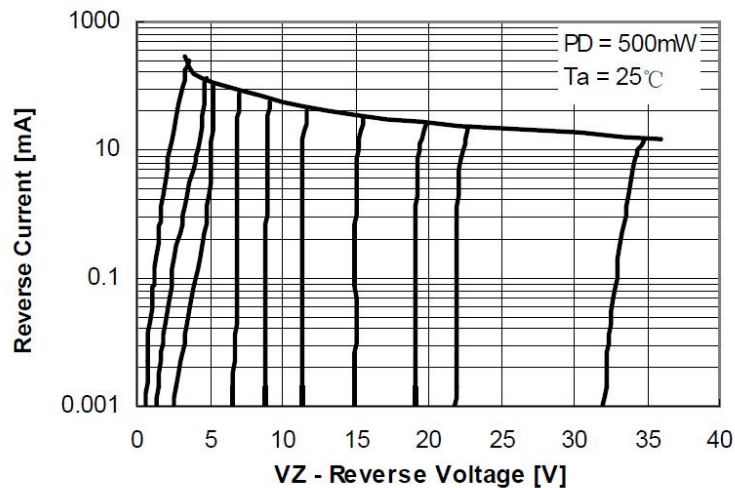
**Figure 2. Total Capacitance**



**Figure 3. Differential Impedance vs. Zener Voltage**



**Figure 4. Forward Current vs. Forward Voltage**



**Figure 5. Reverse Current vs. Reverse Voltage**