

ZMC RD...UM Series

ZENER DIODES

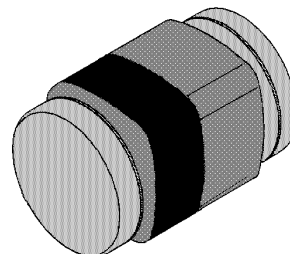
LS-31

Features

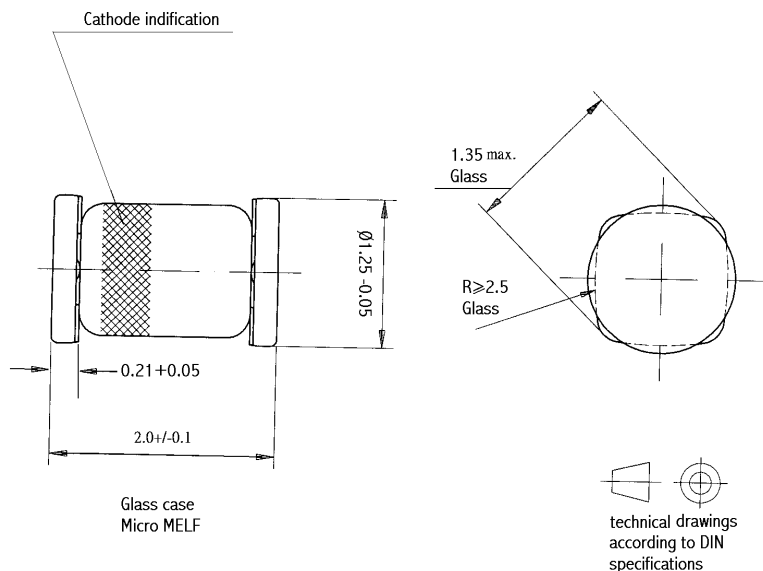
- Sharp Breakdown Characteristics
- Vz: Applied E24 standard

Applications

- Circuits for Constant Voltage, Constant Current
Wave form clipper, Surge absorber, etc.

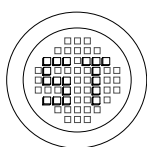


Dimensions in mm



Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	150	mW
Forward Current	I_F	100	mA
Reverse Surge Power (at $t = 10\text{ }\mu\text{s} / 1\text{ pulse}$)	P_{RSM}	85	W
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_s	- 55 to + 155	$^{\circ}\text{C}$



®

SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



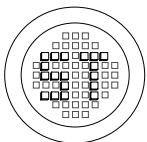
ISO 9001:2000
Certificate No. 0506098

Dated : 17/05/2006

ZMC RD...UM Series

Characteristics at $T_a = 25^\circ\text{C}$

Type	Zener Voltage			Dynamic Impedance		Reverse Current	
	$V_Z (V)^{1)}$			$Z_Z (\Omega)^{2)}$		$I_R (\mu A)$	
	Min.	Max.	$I_Z (mA)$	Max.	$I_Z (mA)$	Max.	$V_R (V)$
ZMCRD2V0UMB	1.8	2.15	5	100	5	120	0.5
ZMCRD2V2UMB	2.1	2.4	5	100	5	120	0.7
ZMCRD2V4UMB	2.3	2.6	5	100	5	120	1
ZMCRD2V7UMB	2.5	2.9	5	110	5	120	1
ZMCRD2V7UMB1	2.5	2.75					
ZMCRD2V7UMB2	2.65	2.9					
ZMCRD3V0UMB	2.8	3.2	5	120	5	50	1
ZMCRD3V0UMB1	2.8	3.05					
ZMCRD3V0UMB2	2.95	3.2					
ZMCRD3V3UMB	3.1	3.5	5	130	5	20	1
ZMCRD3V3UMB1	3.1	3.35					
ZMCRD3V3UMB2	3.25	3.5					
ZMCRD3V6UMB	3.4	3.8	5	130	5	10	1
ZMCRD3V6UMB1	3.4	3.65					
ZMCRD3V6UMB2	3.55	3.8					
ZMCRD3V9UMB	3.7	4.1	5	130	5	10	1
ZMCRD3V9UMB1	3.7	3.97					
ZMCRD3V9UMB2	3.87	4.1					
ZMCRD4V3UMB	4	4.49	5	130	5	10	1
ZMCRD4V3UMB1	4	4.22					
ZMCRD4V3UMB2	4.14	4.35					
ZMCRD4V3UMB3	4.27	4.49					
ZMCRD4V7UMB	4.4	4.92	5	130	5	10	1
ZMCRD4V7UMB1	4.4	4.63					
ZMCRD4V7UMB2	4.53	4.77					
ZMCRD4V7UMB3	4.67	4.92					
ZMCRD5V1UMB	4.82	5.39	5	130	5	5	1.5
ZMCRD5V1UMB1	4.82	5.06					
ZMCRD5V1UMB2	4.96	5.22					
ZMCRD5V1UMB3	5.12	5.39					
ZMCRD5V6UMB	5.29	5.94	5	80	5	5	2.5
ZMCRD5V6UMB1	5.29	5.57					
ZMCRD5V6UMB2	5.47	5.75					
ZMCRD5V6UMB3	5.65	5.94					
ZMCRD6V2UMB	5.84	6.55	5	50	5	2	3
ZMCRD6V2UMB1	5.84	6.14					
ZMCRD6V2UMB2	6.04	6.35					
ZMCRD6V2UMB3	6.24	6.55					
ZMCRD6V8UMB	6.44	7.17	5	30	5	2	3.5
ZMCRD6V8UMB1	6.44	6.76					
ZMCRD6V8UMB2	6.62	6.96					
ZMCRD6V8UMB3	6.83	7.17					
ZMCRD7V5UMB	7.03	7.87	5	30	5	2	4
ZMCRD7V5UMB1	7.03	7.39					
ZMCRD7V5UMB2	7.25	7.63					
ZMCRD7V5UMB3	7.49	7.87					
ZMCRD8V2UMB	7.73	8.67	5	30	5	2	5
ZMCRD8V2UMB1	7.73	8.13					
ZMCRD8V2UMB2	7.98	8.39					
ZMCRD8V2UMB3	8.25	8.67					



®

SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

Dated : 17/05/2006

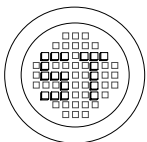
ZMC RD...UM Series

Characteristics at $T_a = 25^\circ\text{C}$

Type	Zener Voltage			Dynamic Impedance		Reverse Current	
	$V_Z (\text{V})$ ¹⁾			$Z_Z (\Omega)$ ²⁾		$I_R (\mu\text{A})$	
	Min.	Max.	$I_Z (\text{mA})$	Max.	$I_Z (\text{mA})$	Max.	$V_R (\text{V})$
ZMCRD9V1UMB	8.53	9.58	5	30	5	2	6
ZMCRD9V1UMB1	8.53	8.96					
ZMCRD9V1UMB2	8.81	9.26					
ZMCRD9V1UMB3	9.12	9.58					
ZMCRD10UMB	9.42	10.58	5	30	5	2	7
ZMCRD10UMB1	9.42	9.9					
ZMCRD10UMB2	9.74	10.24					
ZMCRD10UMB3	10.08	10.58					
ZMCRD11UMB	10.4	11.6	5	30	5	2	8
ZMCRD11UMB1	10.4	10.92					
ZMCRD11UMB2	10.72	11.26					
ZMCRD11UMB3	11.06	11.6					
ZMCRD12UMB	11.38	12.64	5	30	5	2	9
ZMCRD12UMB1	11.38	11.94					
ZMCRD12UMB2	11.69	12.28					
ZMCRD12UMB3	12.04	12.64					
ZMCRD13UMB	12.43	14	5	35	5	2	10
ZMCRD13UMB1	12.43	13.07					
ZMCRD13UMB2	12.87	13.53					
ZMCRD13UMB3	13.33	14					
ZMCRD15UMB	13.8	15.56	5	40	5	2	11
ZMCRD15UMB1	13.8	14.5					
ZMCRD15UMB2	14.3	15.02					
ZMCRD15UMB3	14.81	15.56					
ZMCRD16UMB	15.31	17.14	5	40	5	2	12
ZMCRD16UMB1	15.31	16.07					
ZMCRD16UMB2	15.78	16.58					
ZMCRD16UMB3	16.3	17.14					
ZMCRD18UMB	16.89	19.08	5	45	5	2	13
ZMCRD18UMB1	16.89	17.75					
ZMCRD18UMB2	17.51	18.4					
ZMCRD18UMB3	18.16	19.08					
ZMCRD20UMB	18.8	21.14	5	50	5	2	15
ZMCRD20UMB1	18.8	19.76					
ZMCRD20UMB2	19.46	20.45					
ZMCRD20UMB3	20.15	21.14					
ZMCRD22UMB	20.81	23.25	5	55	5	2	17
ZMCRD22UMB1	20.81	21.84					
ZMCRD22UMB2	21.46	22.55					
ZMCRD22UMB3	22.15	23.25					
ZMCRD24UMB	22.86	25.66	5	60	5	2	19
ZMCRD24UMB1	22.86	24.03					
ZMCRD24UMB2	23.65	24.85					
ZMCRD24UMB3	24.45	25.66					
ZMCRD27UMB	25.1	28.9	2	70	2	2	21
ZMCRD30UMB	28	32	2	80	2	2	23
ZMCRD33UMB	31	35	2	80	2	2	25
ZMCRD36UMB	34	38	2	90	2	2	27
ZMCRD39UMB	37	41	2	100	2	2	30

Note 1. V_Z is tested with pulse (20ms).

2. Z_Z is measured at I_Z by given a very small A.C. Current Signal.



®

SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116

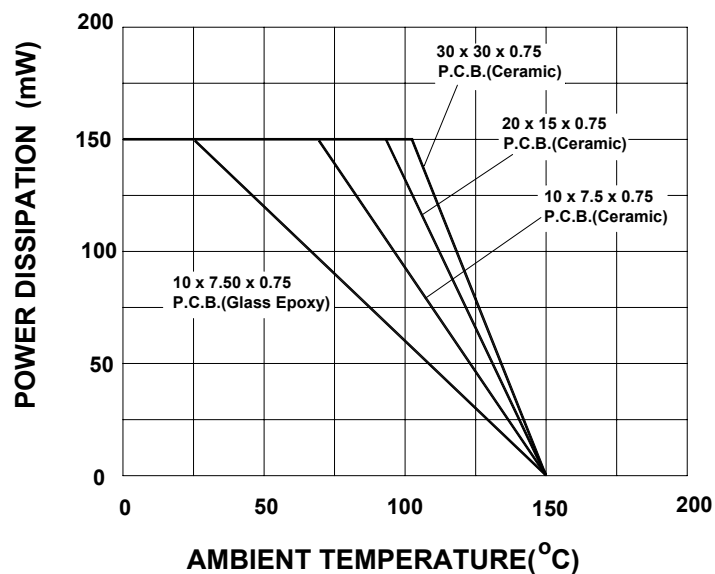


ISO 9001:2000
Certificate No. 0506098

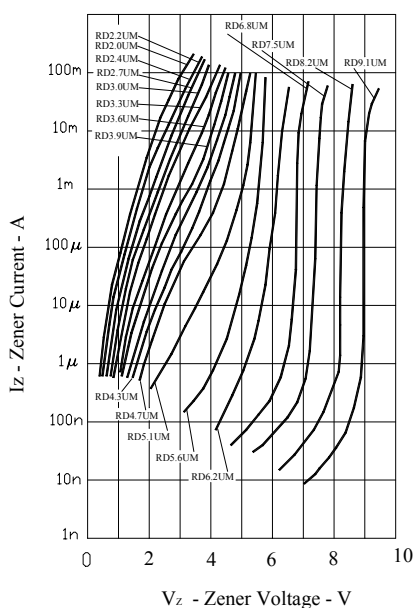
Dated : 17/05/2006

ZMC RD...UM Series

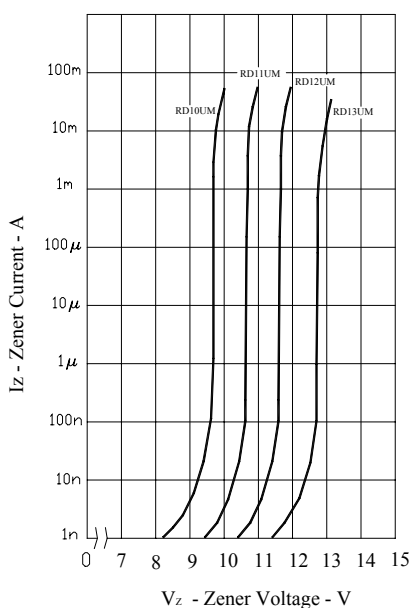
P - Ta Rating



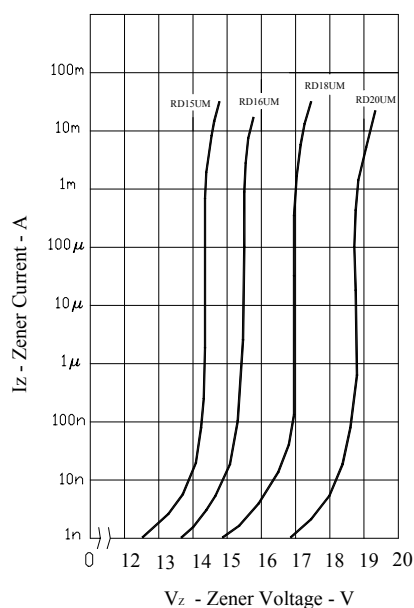
Iz - Vz CHARACTERISTICS



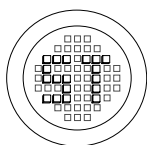
(a)



(b)



(c)



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103

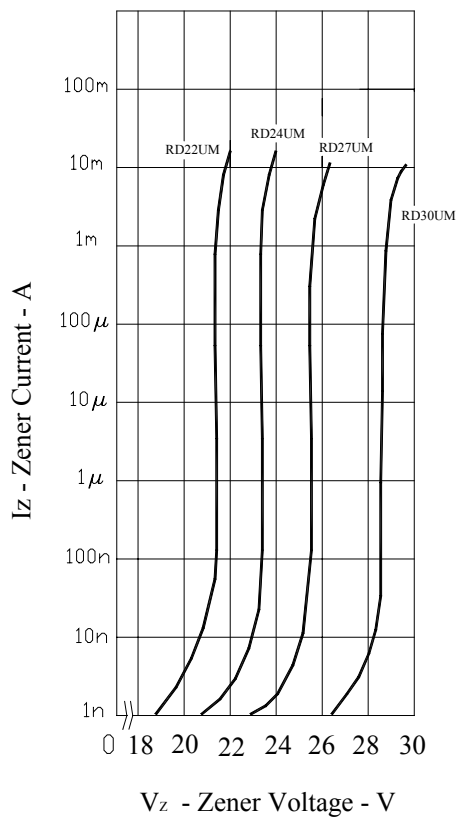


ISO 14001:2004
Certificate No. 7116

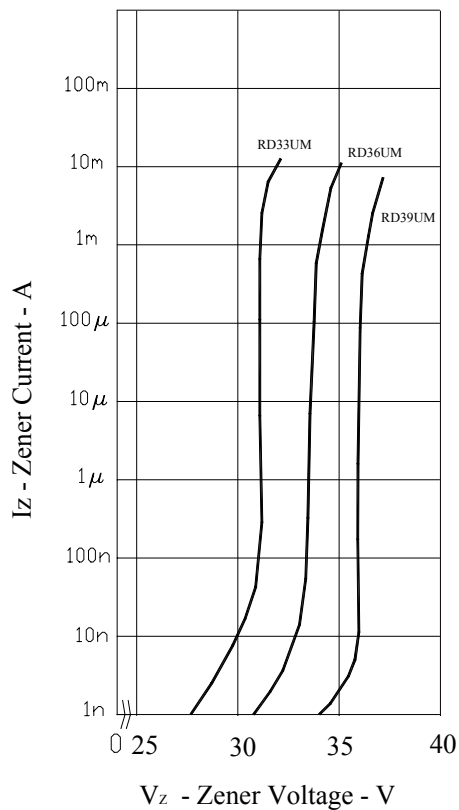


ISO 9001:2000
Certificate No. 0506098

Dated : 17/05/2006

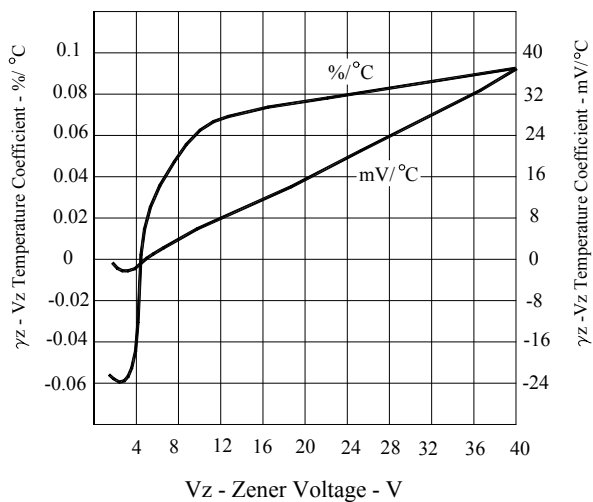


(d)

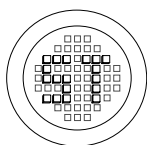
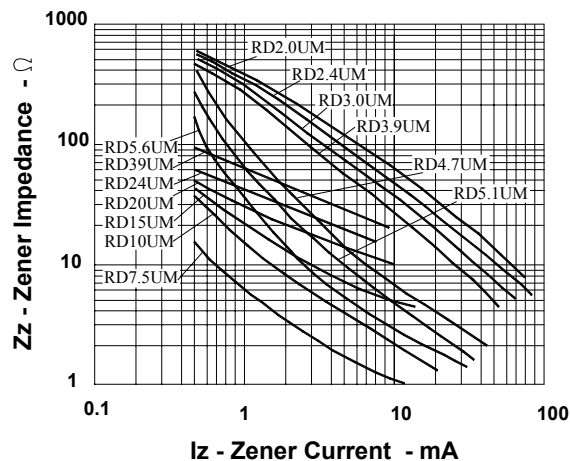


(e)

γ_z - V_z CHARACTERISTICS



Z_z - I_z Characteristics



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



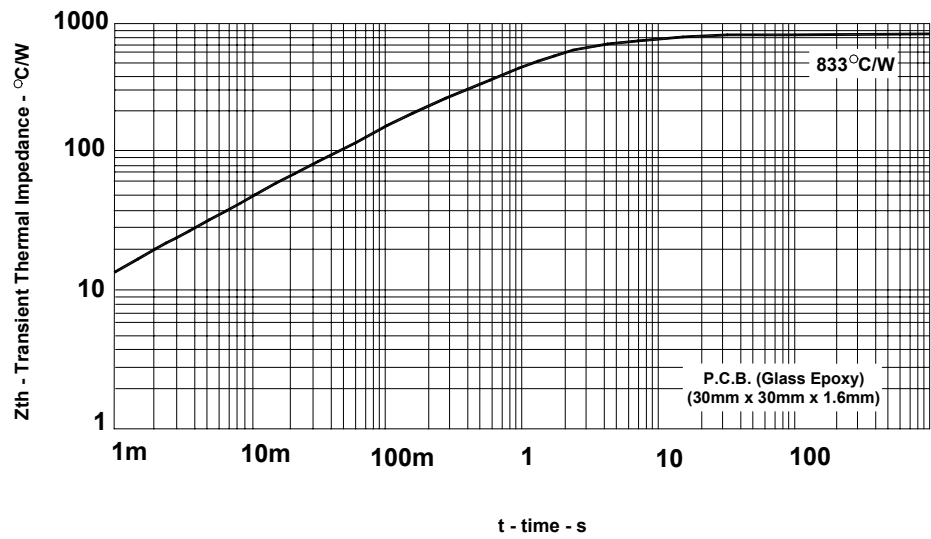
ISO 14001:2004
Certificate No. 7116



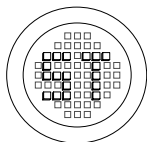
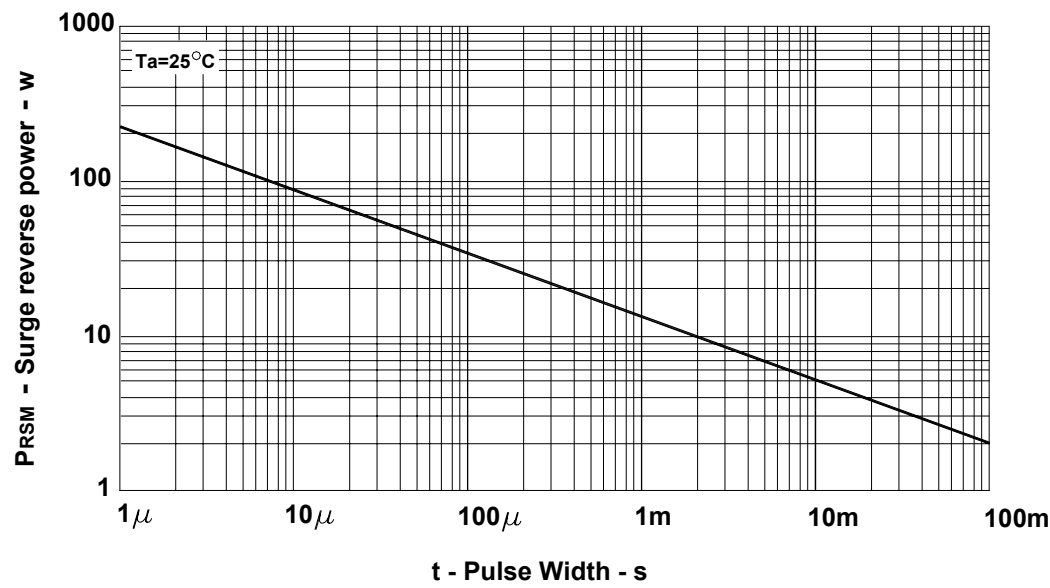
ISO 9001:2000
Certificate No. 0506098

Dated : 17/05/2006

TRANSIENT THERMAL IMPEDNCE CHARACTERISTICS



SURGE REVERSE POWER RATINGS



SEMTECH ELECTRONICS LTD.
(Subsidiary of Semtech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



Dated : 17/05/2006