

Standard version with small dimensions

Construction

- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Negative pole connected to case
- Axial leads, welded to ensure perfect electrical contact

Features

- Standard version with small dimensions
- Operation at temperatures up to 105 °C ¹⁾
- Good electrical characteristics
- High ripple current capability

Applications

- For general-purpose applications in the entertainment industry
- Semi-professional to professional application range
- For filtering, coupling and pulse circuits

Tape packaging

Capacitors with $d \leq 16$ mm are also available on tape.

Refer to page 276 for information on tapes and examples on how to order them.



KAL0277-Z

Specifications and characteristics in brief

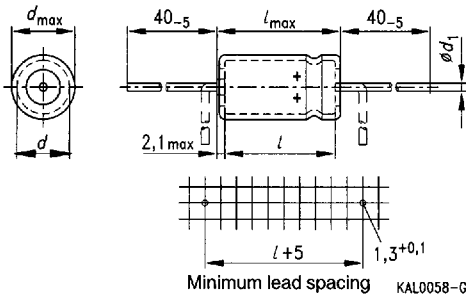
	B 41 010, B 41 283		B 43 050, B 43 283
Rated voltage V_R	6,3 ... 100 Vdc		160 ... 350 Vdc
Surge voltage V_S	$1,15 \cdot V_R$		$1,15 \cdot V_R$ (for $V_R \leq 250$ Vdc) $1,1 \cdot V_R$ (for $V_R = 350$ Vdc)
Rated capacitance C_R	4,7 ... 10 000 μ F		1 ... 220 μ F
Capacitance tolerance	$-10/+50\% \pm T$		$-10/+50\% \pm T$
Service life	$d \leq 10$ mm	$d \geq 12$ mm	$> 200\,000$ h ($I_{acR,85^\circ C}$) $> 3\,000$ h
40 °C, V_R	$> 200\,000$ h ($I_{acR,85^\circ C}$)	$> 200\,000$ h ($1,4 \cdot I_{acR,85^\circ C}$)	
85 °C, V_R ; $I_{ac,max}$	$> 3\,000$ h	$> 4\,000$ h	
Fraction failure	$\leq 1\%$ (during the service life)		$\leq 1\%$ (during the service life)
Failure rate (1 fit = $1 \cdot 10^{-9}$ /h)	$d \leq 10$ mm: ≤ 100 fit $d \geq 12$ mm: ≤ 40 fit		≤ 100 fit
Voltage endurance test	2000 h, 85 °C (at V_R)		2000 h, 85 °C (at V_R)

1) Operation at 105 °C and 0,6 $I_{ac,max,85^\circ C}$ permissible for a total of 500 h.



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Leakage current I_{lka} (5 min, 20 °C)	$I_{lka} \leq 0,3 \mu A \cdot \left(\frac{C_R}{\mu F} \cdot \frac{V_R}{V} \right)^{0,7} + 4 \mu A$										
Self-inductance <i>ESL</i>	<i>d</i> (mm)	6,5	8,5	10	10	12	14	16	18	21	25
	<i>l</i> (mm)	17,5	17,5	20	25	30	30	30	39,5	40	40
	<i>ESL</i> approx. (nH)	14	17	31	35	37	38	45	57	30	34
IEC climatic category	in accordance with IEC 68–1 40/085/56 (– 40 °C/+ 85 °C)										
Detail specifications	similar to CECC 30 301-044 similar to DIN 45 910 part 126										
Sectional specifications	IEC 384–4 DIN 45 910 part 12										
Vibration resistance	in accordance with IEC 68–2–6, test Fc: displacement amplitude 0,35 mm, frequency range 10 ... 55 Hz, acceleration max. 5 g, duration 3 × 2 h										



Type	Dimensions (mm)		Lead wire diameter d_1	Approximate weight (g)
	$d \times l$	$d_{\max} \times l_{\max}$		
B 41 283	$6,5 \times 17,5$	$7,0 \times 19$	0,6	1,1
B 43 283	$8,5 \times 17,5$	$9,0 \times 19$		1,8
	10×20	$10,5 \times 21,5$		2,6
	10×25	$10,5 \times 26,5$		3,2
B 41 010	12×30	$12,5 \times 32$	0,8	5,4
B 43 050	14×30	$14,5 \times 32$		7,5
	16×30	$16,5 \times 32$		9,3
	$18 \times 39,5$	$18,5 \times 40,3$		14
	21×40	$21,5 \times 41,5$		18
	25×40	$25,5 \times 41,5$		26

Packing units

Case dimensions $d \times l$ (mm)	Bulk PU (pcs.)	Reel packing PU (pcs./reel)	AMMO packing PU (pcs./box)
$6,5 \times 17,5$	2000	1300	1000
$8,5 \times 17,5$	1500	1000	800
10×20	900	600	700
10×25	900	600	700
12×30	600	450	600
14×30	400	350	500
16×30	350	250	350
$18 \times 39,5$	250	—	—
21×40	200	—	—
25×40	150	—	—



B 41 010, B 41 283
B 43 050, B 43 283

Overview of available types

Types B 41 010, B 41 283

V_R (Vdc)	6,3	10	16	25	40	63	100
C_R (μF)	Case dimensions $d \times l$ (mm)						
4,7							6,5 × 17,5
10						6,5 × 17,5	8,5 × 17,5
22					6,5 × 17,5	8,5 × 17,5	8,5 × 17,5
47				6,5 × 17,5	8,5 × 17,5	8,5 × 17,5	10 × 25
100		6,5 × 17,5	8,5 × 17,5	8,5 × 17,5	10 × 20	10 × 25	12 × 30
220		8,5 × 17,5	8,5 × 17,5	10 × 20	10 × 25	12 × 30	16 × 30
470	8,5 × 17,5	10 × 20	10 × 25	12 × 30	12 × 30	16 × 30	21 × 40
1 000	10 × 25	12 × 30	12 × 30	14 × 30	16 × 30	21 × 40	
2 200	12 × 30	14 × 30	16 × 30	18 × 39,5	21 × 40		
4 700	16 × 30	18 × 39,5	21 × 40	25 × 40			
10 000		25 × 40					

Types B 43 050, B 43 283

V_R (Vdc)	160	250	350
C_R (μF)	Case dimensions $d \times l$ (mm)		
1,0			6,5 × 17,5
2,2			8,5 × 17,5
4,7	8,5 × 17,5	8,5 × 17,5	10 × 20
10	10 × 20	10 × 25	12 × 30
22	12 × 30	12 × 30	14 × 30
47	14 × 30	16 × 30	18 × 39,5
100	18 × 39,5	21 × 40	25 × 40
220	25 × 40		

The above capacitance and voltage ratings are available in smaller cases upon request. Other voltage and capacitance ratings are also available upon request.



Technical data and ordering codes

V_R	C_R	Case dimensions $d \times l$ mm	ESR_{typ} 100 Hz 20 °C Ω	ESR_{max} 100 Hz 20 °C Ω	Z_{max} 10 kHz 20 °C Ω	$I_{ac,max}$ 100 Hz 40 °C A	I_{acR} 100 Hz 85 °C A	Ordering code
Vdc	μF							Short code
B41283- ($d \leq 10$ mm), B41010- ($d \geq 12$ mm)								
6,3	470	8,5 × 17,5	0,44	0,75	0,46	0,73	0,25	-C2477-T
	1 000	10 × 25	0,24	0,35	0,22	1,2	0,42	-A2108-T
	2 200	12 × 30	0,12	0,19	0,10	2,1	0,71	-B2228-T
	4 700	16 × 30	0,08	0,11	0,05	3,2	1,1	-E2478-T
10	100	6,5 × 17,5	1,5	3,2	1,7	0,35	0,12	-B3107-T
	220	8,5 × 17,5	0,65	1,4	0,79	0,61	0,21	-C3227-T
	470	10 × 20	0,32	0,68	0,37	1,0	0,36	-A3477-T
	1 000	12 × 30	0,18	0,32	0,16	1,7	0,57	-A3108-T
	2 200	14 × 30	0,19	0,18	0,08	2,3	0,81	-C3228-T
	4 700	18 × 39,5	0,06	0,10	0,05	4,1	1,4	-C3478-T
	10 000	25 × 40	0,05	0,07	0,05	5,5	1,9	-C3109-T
16	100	8,5 × 17,5	1,3	2,8	1,4	0,41	0,14	-B4107-T
	220	8,5 × 17,5	0,58	1,3	0,65	0,61	0,21	-B4227-T
	470	10 × 25	0,27	0,60	0,30	1,1	0,39	-A4477-T
	1 000	12 × 30	0,15	0,28	0,13	1,8	0,63	-B4108-T
	2 200	16 × 30	0,09	0,16	0,06	2,7	0,93	-E4228-T
	4 700	21 × 40	0,06	0,09	0,05	4,4	1,5	-C4478-T
25	47	6,5 × 17,5	2,4	5,3	2,1	0,26	0,09	-B5476-T
	100	8,5 × 17,5	1,0	2,5	1,0	0,46	0,16	-B5107-T
	220	10 × 20	0,44	1,1	0,45	0,81	0,28	-B5227-T
	470	12 × 30	0,21	0,53	0,19	1,5	0,53	-B5477-T
	1 000	14 × 30	0,12	0,25	0,09	2,1	0,74	-C5108-T
	2 200	18 × 39,5	0,07	0,14	0,05	3,8	1,3	-C5228-T
	4 700	25 × 40	0,05	0,09	0,05	5,2	1,8	-C5478-T
40	22	6,5 × 17,5	4,0	8,0	3,6	0,20	0,07	-B7226-T
	47	8,5 × 17,5	1,5	3,8	1,7	0,38	0,13	-D7476-T
	100	10 × 20	0,7	1,8	0,80	0,64	0,22	-B7107-T
	220	10 × 25	0,36	0,80	0,36	0,96	0,33	-A7227-T
	470	12 × 30	0,18	0,38	0,15	1,7	0,57	-B7477-T
	1 000	16 × 30	0,10	0,18	0,08	2,6	0,88	-E7108-T
	2 200	21 × 40	0,07	0,11	0,05	4,1	1,4	-C7228-T
63	10	6,5 × 17,5	5,0	13	6,0	0,17	0,06	-A8106-T
	22	8,5 × 17,5	2,5	6,3	2,7	0,29	0,10	-C8226-T
	47	8,5 × 17,5	1,2	3,0	1,2	0,44	0,15	-C8476-T
	100	10 × 25	0,55	1,4	0,60	0,78	0,27	-A8107-T
	220	12 × 30	0,30	0,64	0,25	1,3	0,44	-B8227-T
	470	16 × 30	0,14	0,30	0,12	2,1	0,74	-D8477-T
	1 000	21 × 40	0,08	0,14	0,06	3,8	1,3	-B8108-T

For instructions on how to determine the ordering codes refer to page 244.





B 41 010, B 41 283 **B 43 050, B 43 283**

Technical data and ordering codes

V_R	C_R	Case dimensions $d \times l$ mm	ESR_{typ} 100 Hz 20 °C Ω	ESR_{max} 100 Hz 20 °C Ω	Z_{max} 10 kHz 20 °C Ω	$I_{ac_{max}}$ 100 Hz 40 °C A	I_{ac_R} 100 Hz 85 °C A	Ordering code Short code
Vdc	μF							
100	4,7	6,5 × 17,5	9,5	24	10	0,15	0,05	-A9475-T
	10	8,5 × 17,5	4,0	10	5,0	0,23	0,08	-J 9106-T
	22	8,5 × 17,5	1,8	4,5	2,2	0,35	0,12	-C9226-T
	47	10 × 25	0,85	2,1	1,0	0,64	0,22	-A9476-T
	100	12 × 30	0,40	1,0	0,45	1,1	0,38	-B9107-T
	220	16 × 30	0,22	0,55	0,20	1,7	0,59	-E9227-T
	470	21 × 40	0,12	0,26	0,10	2,9	1,0	-B9477-T

B43283- ($d \leq 10$ mm), **B43050-** ($d \geq 12$ mm)

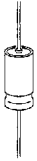
160	4,7	8,5 × 17,5	17	41	33	0,12	0,04	-B 1475-T
	10	10 × 20	8,0	19	15	0,19	0,07	-B 1106-T
	22	12 × 30	4,0	8,8	6,8	0,36	0,12	-B 1226-T
	47	14 × 30	1,9	4,1	3,3	0,55	0,19	-C 1476-T
	100	18 × 39,5	0,95	1,9	1,5	1,02	0,35	-E 1107-T
	220	25 × 40	0,43	0,9	0,7	1,81	0,62	-B 1227-T
250	4,7	8,5 × 17,5	14	35	33	0,13	0,04	-C 2475-T
	10	10 × 25	6,0	15	15	0,24	0,08	-B 2106-T
	22	12 × 30	3,3	8,3	6,8	0,39	0,13	-C 2226-T
	47	16 × 30	1,5	3,8	3,3	0,67	0,23	-D 2476-T
	100	21 × 40	0,72	1,8	1,5	1,3	0,44	-B 2107-T
350	1,0	6,5 × 17,5	48	120	100	0,06	0,02	-E 4105-T
	2,2	8,5 × 17,5	22	55	44	0,10	0,04	-C 4225-T
	4,7	10 × 20	10	25	20	0,17	0,06	-C 4475-T
	10	12 × 30	5,6	14	12	0,30	0,10	-B 4106-T
	22	14 × 30	2,5	6,3	5,5	0,48	0,17	-D 4226-T
	47	18 × 39,5	1,2	3,0	2,7	0,91	0,31	-C 4476-T
	100	25 × 40	0,56	1,4	1,2	1,6	0,54	-B 4107-T

How to determine the ordering code

To obtain the required ordering code, prefix the type number to the short code.

E.g.: B41283-C2477-T

Type number for	$V_R = 6,3 \dots 100$ Vdc	$V_R = 160 \dots 350$ Vdc
$d \leq 10$ mm	B41283-...	B43283-...
$d \geq 12$ mm	B41010-...	B43050-...

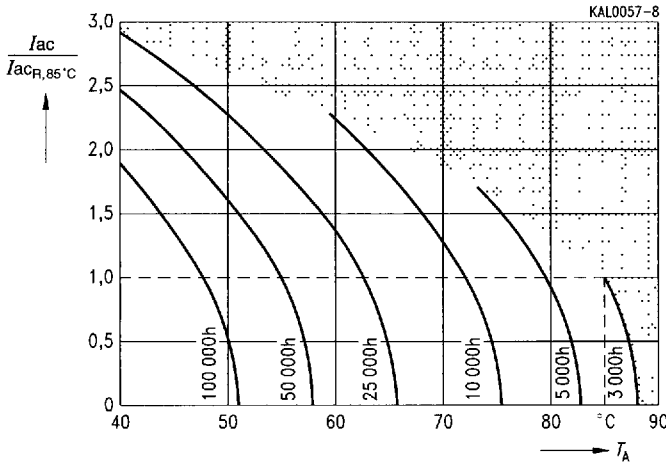


Service life

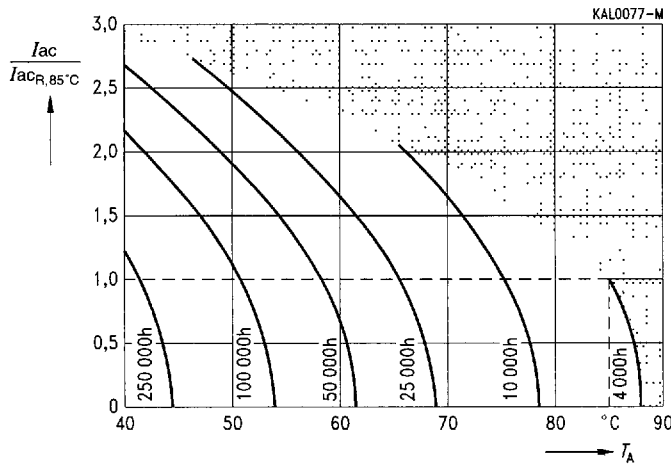
versus ambient temperature T_A under ripple current operating conditions¹⁾

$V_R = 6,3 \dots 100 \text{ Vdc}$ ($d \leq 10 \text{ mm}$)

$V_R = 160 \dots 350 \text{ Vdc}$



$V_R = 6,3 \dots 100 \text{ Vdc}$ ($d \geq 12 \text{ mm}$)



1) Refer to page 31 for an explanation of how to interpret the service life graphs.

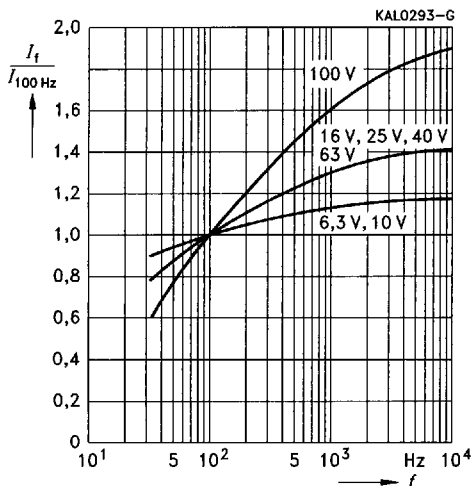




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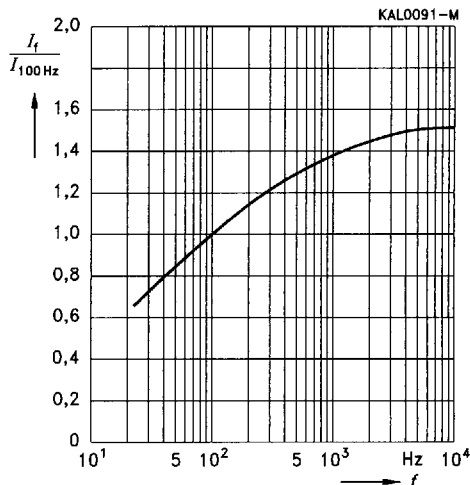
Permissible ripple current i_{ac}
versus frequency f

$V_R \leq 100 \text{ Vdc}$



Permissible ripple current i_{ac}
versus frequency f

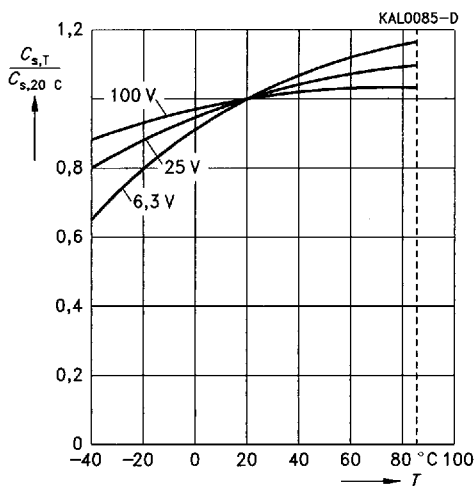
$V_R \geq 160 \text{ Vdc}$



Series capacitance C_s at $f = 100 \text{ Hz}$
versus temperature T

Typical behavior

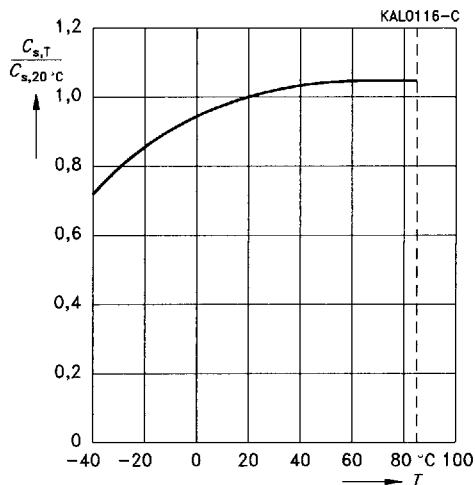
$V_R \leq 100 \text{ Vdc}$



Series capacitance C_s at $f = 100 \text{ Hz}$
versus temperature T

Typical behavior

$V_R \geq 160 \text{ Vdc}$



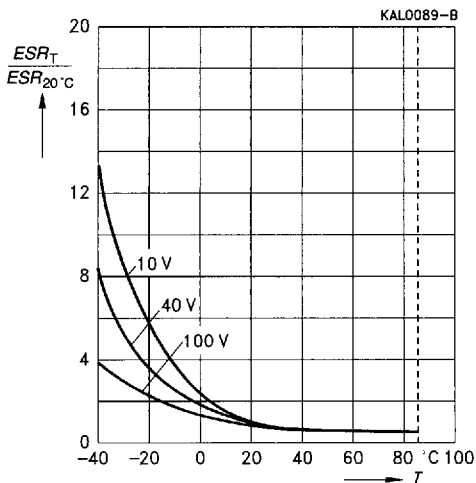


Equivalent series resistance ESR

at $f = 100$ Hz versus temperature T

Typical behavior

$V_R \leq 100$ Vdc

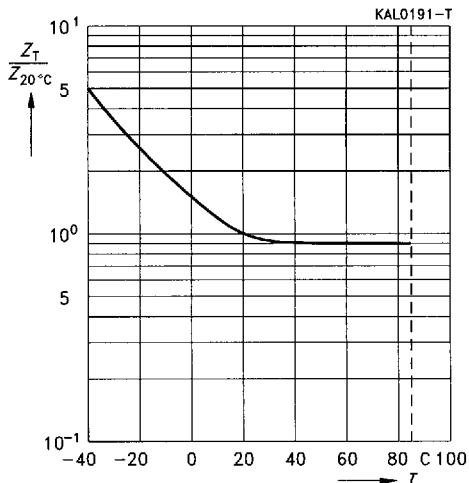


Impedance Z at $f = 100$ Hz

versus temperature T

Typical behavior

$V_R \geq 160$ Vdc

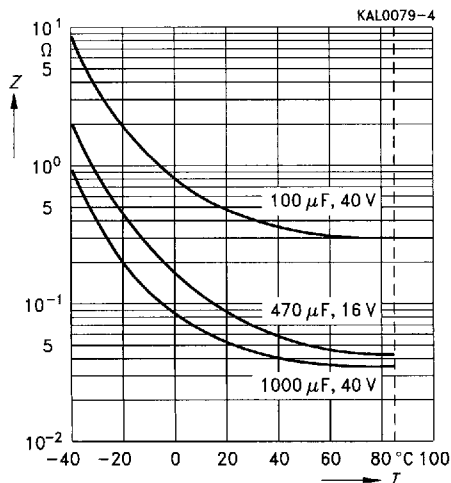


Impedance Z at $f = 10$ kHz

versus temperature T

Typical behavior

$V_R \leq 100$ Vdc

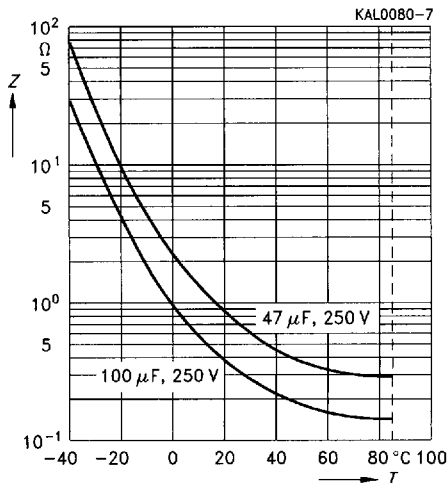


Impedance Z at $f = 10$ kHz

versus temperature T

Typical behavior

$V_R \geq 160$ Vdc





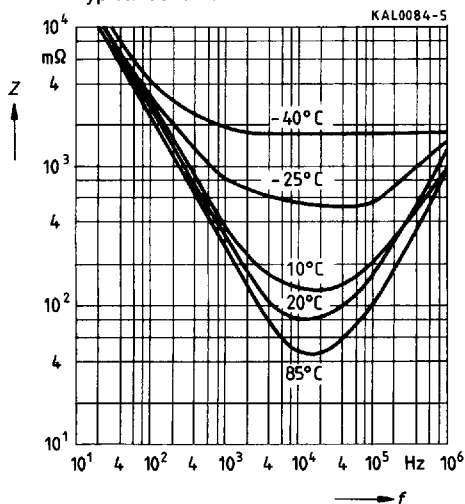
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Impedance Z

versus frequency f

and temperature T for 470 $\mu\text{F}/16\text{ Vdc}$

Typical behavior

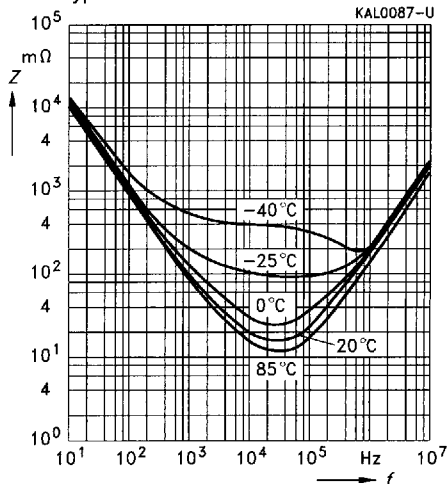


Impedance Z

versus frequency f

and temperature T for 1000 $\mu\text{F}/40\text{ Vdc}$

Typical behavior

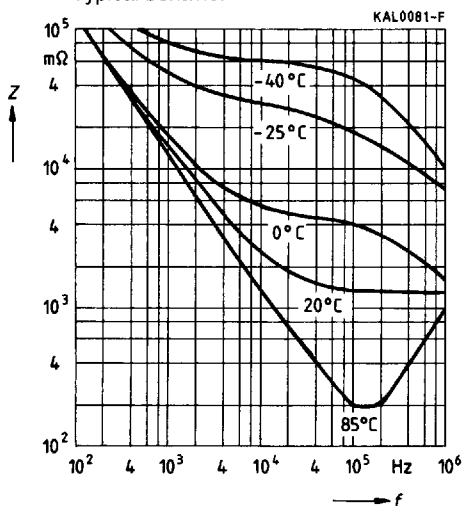


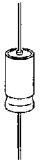
Impedance Z

versus frequency f

and temperature T for 10 $\mu\text{F}/250\text{ Vdc}$

Typical behavior



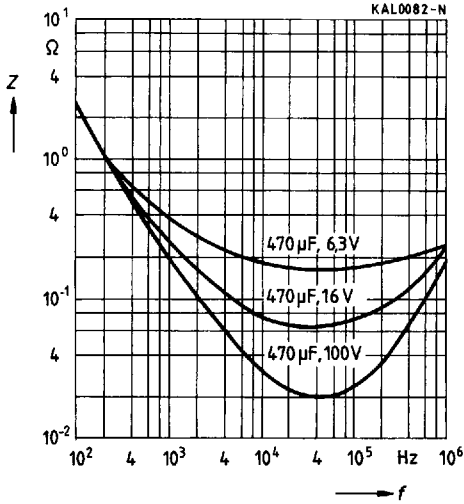


Impedance Z

versus frequency f

Typical values at 20 °C

$V_R \leq 100$ Vdc



Impedance Z

versus frequency f

Typical values at 20 °C

$V_R \geq 160$ Vdc

