

New series
Construction

- Polar tantalum capacitors with solid electrolyte
- Tantalum polymer technology (cathode consists of a solid conductive polymer)
- Three parallel low ESR tantalum capacitors in one case ("multiple anode")
- Flame-retardant plastic case (UL 94 V-0)
- Tinned terminals


Features

- High volumetric efficiency
- Ultra-low ESR, high ripple current
- Excellent solderability
- Stable temperature and frequency characteristics
- High ESR stability during temperature rise
- High permissible ripple current
- Only low derating necessary
- Low dissipation factor
- High resistance to shock and vibration
- Suitable for use without series resistor (recommended operating voltage $0,8 \cdot V_R$)

Applications

- Telecommunications (e.g. mobile phones, private branch exchanges)
- Data processing (e.g. laptops, main frames)
- Measuring and control engineering
- Medical engineering
- Switch-mode power supplies with very high clock frequencies (300 kHz)
- DC/DC converters

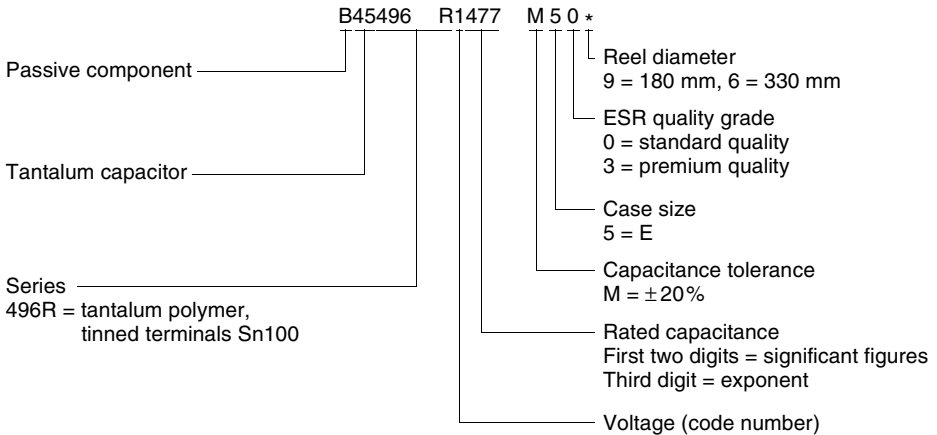
Soldering

Suitable for reflow soldering (IR and vapor phase) and wave soldering

Delivery mode

Taped and reeled in accordance with IEC 60286-3

Ordering code structure

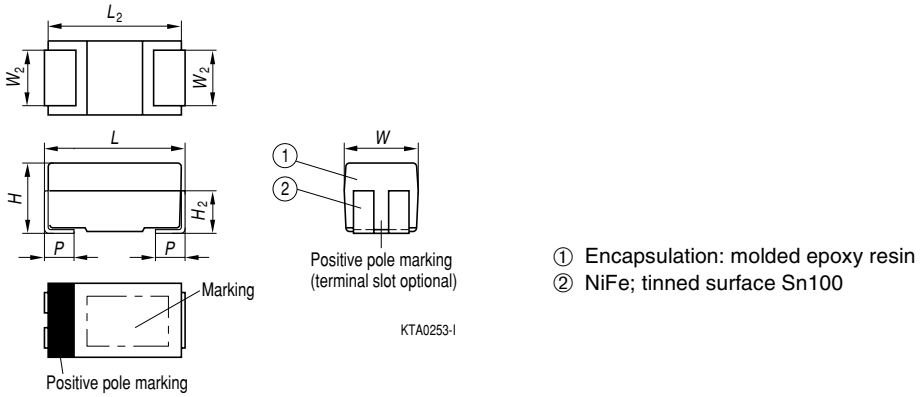


Specifications and characteristics in brief

For characteristic curves see "General Technical Information", page 107 ff.

	Ultra-Low ESR; multiple anode
Series	B45496R
Technology	Ta-Poly
Terminals	Tinned
Rated voltage V_R (up to 85 °C)	2,5 ... 6,3 Vdc
Rated capacitance C_R	470 ... 1500 μF
Capacitance tolerance	$\pm 20\%$
Operating temperature	$-55 \dots +105 \text{ }^\circ\text{C}$
Failure rate	Specification in preparation
Service life	> 500 000 h
Leakage current (V_R , 5 min, 20 °C)	100 nA/ μC
ESR_{max} (20 °C, 100 kHz)	10 ... 20 m Ω
IEC climatic category	To IEC 60068-1 55/105/56 ($-55/+105 \text{ }^\circ\text{C}$; 56 days damp heat test)

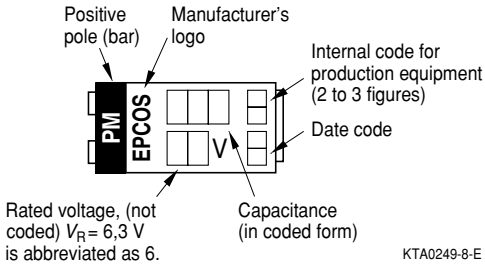
Dimensional drawing



Case size	Dimensions in mm (inches)						
	L	W	H	L_2 typ.	$W_2 \pm 0,1$ $\pm(,004)$	H_2 typ.	$p \pm 0,3$ $\pm(,012)$
E (5)	$7,3 \pm 0,3$ (,287 $\pm$,012)	$4,3 \pm 0,3$ (,169 $\pm$,012)	$4,1 \pm 0,3$ (,157 $\pm$,012)	7,1 (,280)	2,4 (,094)	1,6 (,062)	1,3 (,051)

Marking

Case size E



Capacitance coding

1st and 2nd digit	Capacitance in pF
3rd digit	Multiplier: $7 = 10^7 \text{ pF}$

Date coding

Year	Month	
M = 2000	1 = January	7 = July
N = 2001	2 = February	8 = August
P = 2002	3 = March	9 = September
R = 2003	4 = April	O = October
S = 2004	5 = May	N = November
T = 2005	6 = June	D = December

In addition to the year and month of manufacture, the stamp includes another two or three figures which internally allow us an assignment to production equipment.

Overview of available types

	Ultra-Low ESR		
Series	B45496R		
V_R (Vdc) up to 85 °C	2,5	4	6,3
C_R (μF)			
470			E
680	E	E	E
1000	E	E	
1500	E		

Technical data and ordering codes

V_R up to 85 °C (up to 105 °C) Vdc	C_R μF	Case size	$\tan \delta_{\max}$ (20 °C, 120 Hz)	$I_{k, \max}$ (20 °C, V_R , 5 min) μA	$ESR_{\max}^{1)}$ (20 °C, 100 kHz) mΩ	I_{ac} (20 °C, 100 kHz) A	Ordering code ²⁾
2,5 (1,7)	680	E	0,1	170	18	3,9	B45496R9687M50*
	680	E	0,1	170	10	5,2	B45496R9687M53*
	1000	E	0,1	250	18	3,9	B45496R9108M50*
	1000	E	0,1	250	10	5,2	B45496R9108M53*
	1500	E	0,1	380	20	3,7	B45496R9158M50*
	1500	E	0,1	380	12	4,7	B45496R9158M53*
4 (2,5)	680	E	0,1	270	18	3,9	B45496R0687M50*
	680	E	0,1	270	10	5,2	B45496R0687M53*
	1000	E	0,1	400	18	3,9	B45496R0108M50*
	1000	E	0,1	400	10	5,2	B45496R0108M53*
6,3 (4,0)	470	E	0,1	300	20	3,7	B45496R1477M50*
	470	E	0,1	300	12	4,7	B45496R1477M53*
	680	E	0,1	430	20	3,7	B45496R1687M50*
	680	E	0,1	430	12	4,7	B45496R1687M53*

Upon request

Capacitance tolerance: M = ±20%

1) Other values upon request

2) * Code number for reel diameter: 9 = 180 mm, 6 = 330 mm

Herausgegeben von EPCOS AG**Unternehmenskommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND****☎ ++49 89 636 09, FAX (0 89) 636-2 26 89**

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