

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**

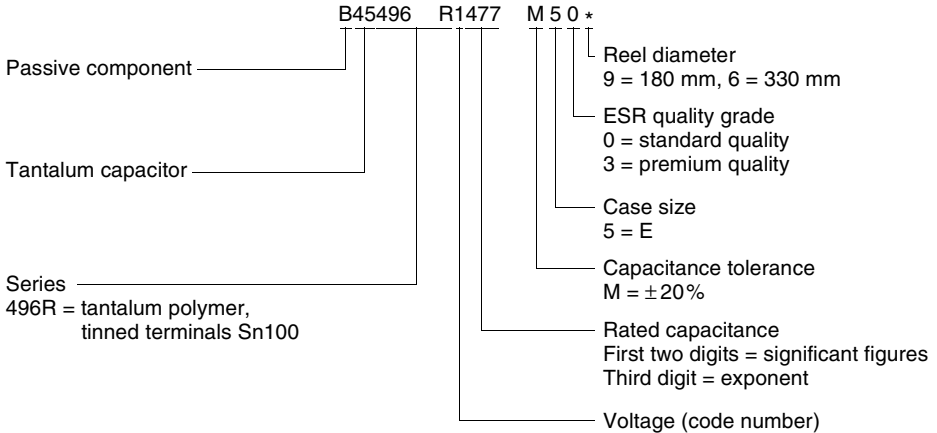
- Telecommunications (e.g. mobile phones, private branch exchanges)
- Data processing (e.g. laptops, main frames)
- Measuring and control engineering
- Medical engineering
- Switch-mode power supplies with very high clock frequencies (300 kHz)
- DC/DC converters

**Soldering**

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

**Delivery mode**

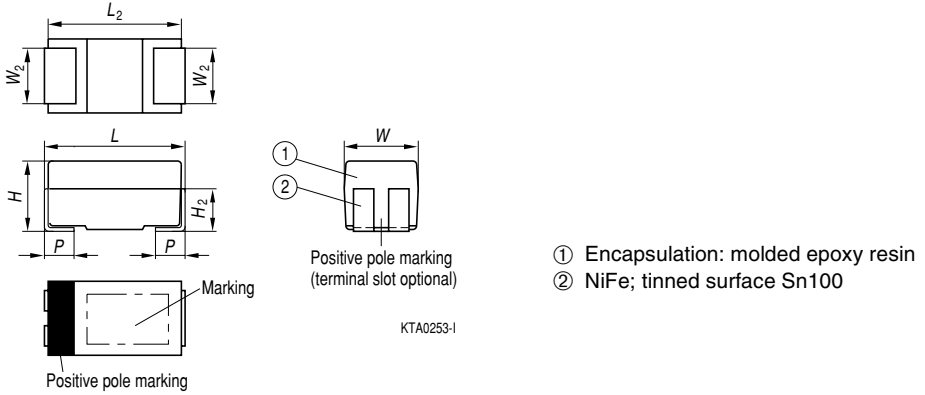
Taped and reeled in accordance with IEC 60286-3

**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 $\mu\text{F}$
Capacitance tolerance	$\pm 20\%$
Operating temperature	-55 ... +105 °C
Failure rate	Specification in preparation
Service life	> 500 000 h
Leakage current ( $V_R$ , 5 min, 20 °C)	100 nA/ $\mu\text{C}$
$ESR_{\text{max}}$ (20 °C, 100 kHz)	10 ... 20 m $\Omega$
IEC climatic category	To IEC 60068-1 55/105/56 (-55/+105 °C; 56 days damp heat test)

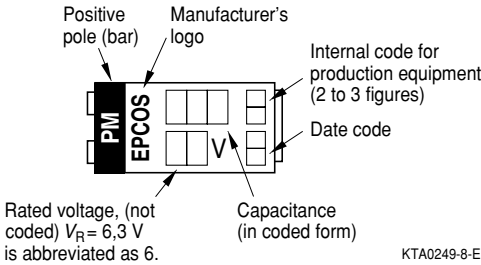
Dimensional drawing



Case size	Dimensions in mm (inches)						
	<i>L</i>	<i>W</i>	<i>H</i>	<i>L</i> <sub>2</sub> typ.	<i>W</i> <sub>2</sub> ± 0,1 ±(,004)	<i>H</i> <sub>2</sub> typ.	<i>p</i> ± 0,3 ±(,012)
E (5)	7,3 ± 0,3 (,287±,012)	4,3 ± 0,3 (,169±,012)	4,1 ± 0,3 (,157±,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 = $10^7$ 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)	$I_{lk, max}$ (20 °C, $V_R$ , 5 min) μA	$ESR_{max}^{1)}$ (20 °C, 100 kHz) mΩ	$I_{ac}$ (20 °C, 100 kHz) A	Ordering code <sup>2)</sup>
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 =  $\pm 20\%$

1) Other values upon request

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

**Herausgegeben von EPCOS AG**

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