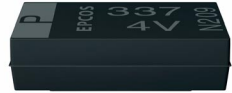


New series 

Construction

- Polar tantalum capacitors with solid electrolyte
- Tantalum polymer technology (cathode consists of a solid conductive polymer)
- Flame-retardant plastic case (UL 94 V-0)
- Tinned terminals



Features

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

Applications

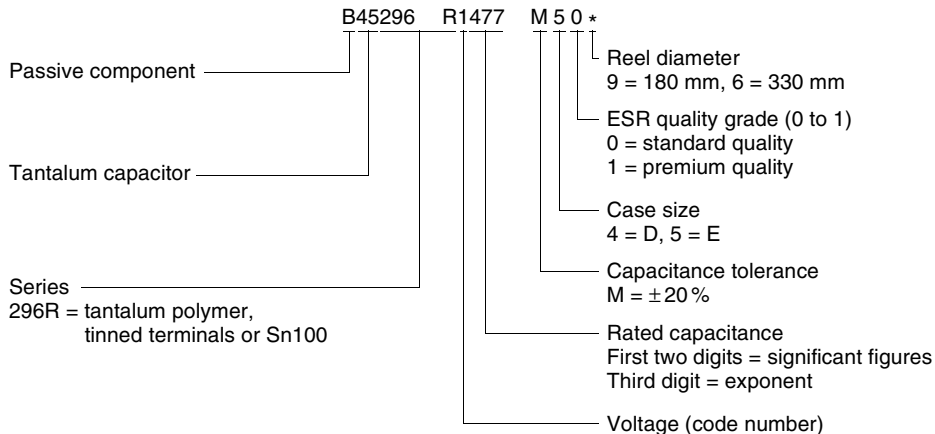
- Telecommunications (e.g. mobile phones, private branch exchanges, PDA)
- Data processing (e.g. laptops, main frames)
- Measuring and control engineering
- Automotive electronics (e.g. navigation systems, convenience electronics)
- Medical engineering
- DC/DC converters

Soldering

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

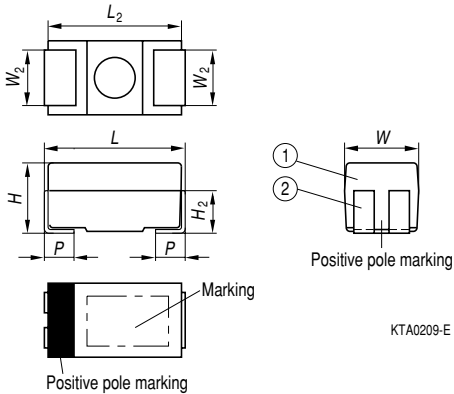
Delivery mode

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
Series	B45296R
Technology	Ta-Poly
Terminals	Tinned
Rated voltage V_R (up to 85 °C)	2,5 ... 10 Vdc
Rated capacitance C_R	100 ... 680 μ 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/ μ C
ESR_{max} (20 °C, 100 kHz)	35 ... 80 m Ω
IEC climatic category	To IEC 60068-1 55/105/56 (-55/+105 °C; 56 days damp heat test)

Dimensional drawing


- ① Encapsulation: molded epoxy resin
- ② NiFe; tinned surface Sn100

KTA0209-E

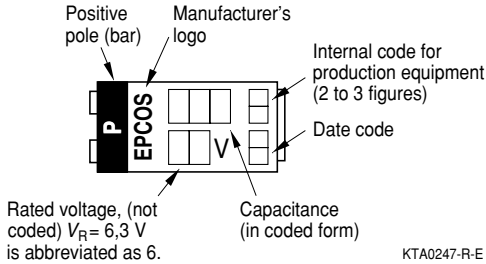
Parts are nearly black, letter are gray.

Case size	Dimensions in mm (inches)						
	L	W	H	L_2 typ.	$W_2 \pm 0,1$ $\pm(,004)$	H_2 typ.	$p \pm 0,3$ $\pm(,012)$
D (4)	$7,3 \pm 0,3$ (,287±,012)	$4,3 \pm 0,3$ (,169±,012)	$2,8 \pm 0,3$ (,110±,012)	7,1 (,280)	2,4 (,094)	1,6 (,062)	1,3 (,051)
E (5)	$7,3 \pm 0,3$ (,287±,012)	$4,3 \pm 0,3$ (,169±,012)	$4,1 \pm 0,3$ (,157±,012)	7,1 (,280)	2,4 (,094)	1,6 (,062)	1,3 (,051)



Marking

Case sizes D, E



Capacitance coding

1st and 2nd digit	Capacitance in pF
3rd digit	Multiplier: 4 = 10^4 pF 5 = 10^5 pF 6 = 10^6 pF 7 = 10^7 pF 8 = 10^8 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

Series	B45296R, tinned terminals Sn100			
V_R (Vdc) up to 85 °C	2,5	4	6,3	10
C_R (μF) ¹⁾				
100				D
150			D	D
220	D	D	D	D
330		D	E	D
470		D	E	
680		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) m Ω	I_{ac} (20 °C, 100 kHz) A	Ordering code ²⁾
2,5	220	D	0,1	55	55	1,7	B45296R9227M40*
(2,0)	220	D	0,1	55	45	1,8	B45296R9227M41*
4	220	D	0,1	88	55	1,7	B45296R0227M40*
(3,2)	220	D	0,1	88	45	1,8	B45296R0227M41*
	330	D	0,1	132	50	1,9	B45296R0337M40*
	330	D	0,1	132	40	1,7	B45296R0337M41*
	330	E	0,1	132	40	2,0	B45296R0337M50*
	330	E	0,1	132	35	2,2	B45296R0337M51*
	470	D	0,1	188	55	1,7	B45296R0477M40*
	470	D	0,1	188	40	1,9	B45296R0477M41*
	680	E	0,1	272	55	1,7	B45296R0687M50*
	680	E	0,1	272	40	2,0	B45296R0687M51*

Capacitance tolerance: M = $\pm 20\%$

1) Other values upon request

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

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) m Ω	I_{ac} (20 °C, 100 kHz) A	Ordering code ²⁾
6,3 (5,0)	150	D	0,1	95	55	1,7	B45296R1157M40*
	150	D	0,1	95	45	1,8	B45296R1157M41*
	220	D	0,1	139	50	1,7	B45296R1227M40*
	220	D	0,1	139	40	1,9	B45296R1227M41*
	330	D	0,1	208	45	1,8	B45296R1337M40*
	330	D	0,1	208	40	1,9	B45296R1337M41*
	330	E	0,1	208	40	2,0	B45296R1337M50*
	330	E	0,1	208	35	2,2	B45296R1337M51*
	470	E	0,1	296	40	2,0	B45296R1477M50*
470	E	0,1	296	35	2,2	B45296R1477M51*	
10 (8,0)	100	D	0,1	100	80	1,4	B45296R2107M40*
	100	D	0,1	100	55	1,7	B45296R2107M41*
	150	D	0,1	150	55	1,7	B45296R2157M41*
	220	D	0,1	220	55	1,7	B45296R2227M40*
	220	D	0,1	220	40	1,9	B45296R2227M41*

Capacitance tolerance: M = $\pm 20\%$

1) Other values upon request

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