

New series 
Construction

- Polar tantalum capacitors with solid electrolyte
- Flame-retardant plastic case (UL 94 V-0)
- Optionally tinned or gold-plated terminals
- Maximum height 2,0 mm


Features

- High volumetric efficiency
- Excellent solderability
- Stable temperature and frequency characteristics
- Low leakage current, low dissipation factor
- Low self-inductance
- High resistance to shock and vibration
- Suitable for use without series resistor
- Low ESR (version R)

Applications

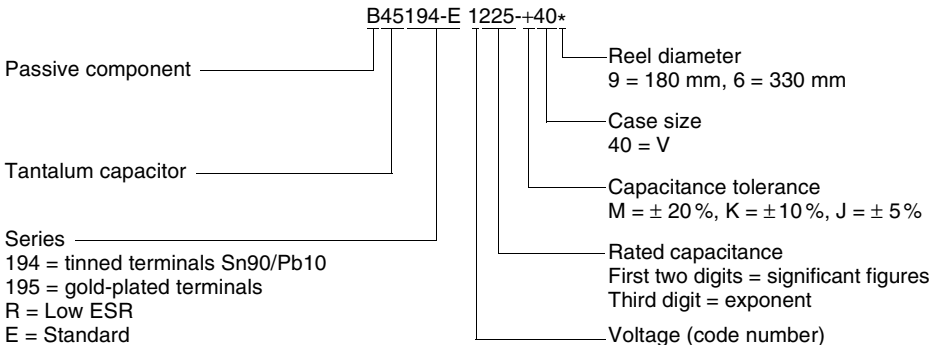
- Telecommunications (e.g. mobile phones, private branch exchanges)
- Data processing (e.g. laptops, main frames)
- Measuring and control engineering
- Automotive electronics
- Medical engineering
- Switch-mode power supplies with very high clock frequencies (300 kHz)
- DC/DC converters

Soldering

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

Delivery mode

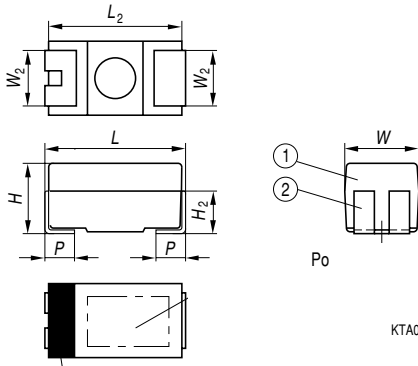
Taped and reeled in accordance with IEC 60286-3

Ordering code structure



Specifications and characteristics in brief

For characteristic curves see page 73.

	Standard		Low ESR	
	B45194-E	B45195-E	B45194-R	B45195-R
Series	B45194-E	B45195-E	B45194-R	B45195-R
Terminals	tinned	gold-plated	tinned	gold-plated
Rated voltage V_R (up to 85 °C)	6,3 ... 35 Vdc		6,3 ... 20 Vdc	
Rated capacitance C_R	6,8 ... 330 μ F		22 ... 220 μ F	
Capacitance tolerance	$\pm 10\%$, $\pm 20\%$ $\pm 5\%$ (on request)		$\pm 10\%$, $\pm 20\%$ $\pm 5\%$ (on request)	
Failure rate	at 40 °C; $\leq V_R$, $R_S \geq 3 \Omega/V$ (1 fit = $1 \cdot 10^{-9}$ failures/h)			
$C_R \cdot V_R \leq 330 \mu F \cdot V$	≤ 8 fit		≤ 8 fit	
$C_R \cdot V_R > 330 \mu F \cdot V$	≤ 24 fit		≤ 24 fit	
Service life	> 500 000 h		> 500 000 h	
Leakage current (V_R , 5 min, 20 °C)	10 nA/ μ C		10 nA/ μ C	
IEC climatic category	in accordance with IEC 60068-1 55/125/56 (–55/+125 °C; 56 days damp heat test)			

Dimensional drawing


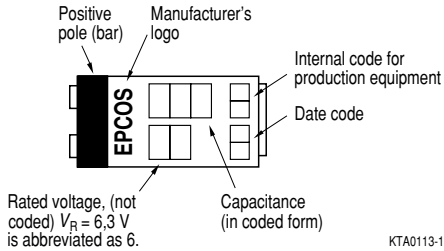
KTA0209-E

- ① Encapsulation: molded epoxy resin
- ② NiFe; surface Sn90/Pb10 or gold-plated

Case size	Dimensions in mm (inches)						
	L	W	H	L_2 typ.	$W_2 \pm 0,1$ $\pm(,004)$	H_2 typ.	$p \pm 0,3$ $\pm(,012)$
V (40)	$7,3 \pm 0,3$ (,287 \pm ,012)	$4,3 \pm 0,3$ (,169 \pm ,012)	2,0 max (,079 max)	7,1 (,280)	2,4 (,094)	1,1 (,043)	1,3 (,051)

Marking

Case size V



Capacitance coding

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


Date coding

Year	Month	
K = 1998	1 = January	7 = July
L = 1999	2 = February	8 = August
M = 2000	3 = March	9 = September
N = 2001	4 = April	O = October
P = 2002	5 = May	N = November
R = 2003	6 = June	D = December

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


Overview of available types

	Standard						Low ESR			
Series	B45194-E, tinned terminals (Sn90/Pb10) B45195-E, gold-plated terminals						B45194-R, tinned terminals (Sn90/Pb10) B45195-R, gold-plated terminals			
V_R (Vdc) up to 85 °C	6,3	10	16	20	25	35	6,3	10	16	20
C_R (μF)										
6,8						V				
10						V				
15					V					
22				V	V					V
33				V					V	
47	V	V	V					V	V	
68	V	V	V					V	V	
100	V	V	V				V	V	V	
150	V	V					V	V		
220	V	V					V	V		
330	V									

 Upon request

Technical data and ordering codes

V_R up to 85°C (up to 125°C) Vdc	C_R μF	Case size	$\tan \delta_{\max}$ (20°C, 120 Hz)	$I_{lk, \max}$ (20°C, V_R , 5 min) μA	Z_{\max} (20°C, 100 kHz) Ω	Ordering code ¹⁾ Tinned terminals (Sn90/Pb10)
6,3 (4)	47	V	0,06	3,0	0,7	B45194-E1476-+40*
	68	V	0,06	4,3	0,7	B45194-E1686-+40*
	100	V	0,08	6,3	0,7	B45194-E1107-+40*
	150	V	0,08	9,5	0,7	B45194-E1157-+40*
	220	V	0,08	14	0,7	B45194-E1227-+40*
	330	V	0,08	21	0,7	B45194-E1337-+40*
10 (6,3)	47	V	0,06	4,7	0,7	B45194-E2476-+40*
	68	V	0,06	6,8	0,7	B45194-E2686-+40*
	100	V	0,08	10	0,7	B45194-E2107-+40*
	150	V	0,08	15	0,7	B45194-E2157-+40*
	220	V	0,08	22	0,7	B45194-E2227-+40*
16 (10)	47	V	0,06	7,5	0,7	B45194-E3476-+40*
	68	V	0,06	11	0,8	B45194-E3686-+40*
	100	V	0,08	16	0,8	B45194-E3107-+40*
20 (13)	22	V	0,06	4,4	0,8	B45194-E4226-+40*
	33	V	0,06	6,6	0,8	B45194-E4336-+40*
25 (16)	15	V	0,06	3,8	1,0	B45194-E5156-+40*
	22	V	0,06	5,5	0,8	B45194-E5226-+40*
35 (23)	6,8	V	0,06	2,4	1,2	B45194-E6685-+40*
	10	V	0,06	3,5	1,0	B45194-E6106-+40*

Upon request

1) Replace 194-E by 195-E for gold-plated terminals

+ Code letter for required capacitance tolerance: M = $\pm 20\%$, K = $\pm 10\%$ (J = $\pm 5\%$ upon request)

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

Technical data and ordering codes

V_R up to 85°C (up to 125°C) Vdc	C_R μF	Case size	$\tan \delta_{\max}$ (20°C, 120 Hz)	$I_{lk, \max}$ (20°C, V_R , 5 min) μA	$ESR_{\max}^{(2)}$ (20°C, 100 kHz) $\text{m}\Omega$	I_{ac} (20°C, 100 kHz) A	Ordering code ¹⁾ Tinned terminals (Sn90/Pb10)
6,3 (4)	100	V	0,08	6,3	150	0,91	B45194-R1107-+40*
	150	V	0,08	9,5	150	0,91	B45194-R1157-+40*
	220	V	0,08	14	150	0,91	B45194-R1227-+40*
10 (6,3)	47	V	0,06	4,7	200	0,79	B45194-R2476-+40*
	68	V	0,06	6,8	200	0,79	B45194-R2686-+40*
	100	V	0,08	10	200	0,79	B45194-R2107-+40*
	150	V	0,08	15	200	0,79	B45194-R2157-+40*
	220	V	0,08	22	200	0,79	B45194-R2227-+40*
16 (10)	33	V	0,06	5,3	250	0,71	B45194-R3336-+40*
	47	V	0,06	7,5	250	0,71	B45194-R3476-+40*
	68	V	0,06	11	250	0,71	B45194-R3686-+40*
	100	V	0,08	16	250	0,71	B45194-R3107-+40*
20 (13)	22	V	0,06	4,4	400	0,56	B45194-R4226-+40*

Upon request

- 1) Replace 194-R by 195-R for gold-plated terminals
+ Code letter for required capacitance tolerance: M = $\pm 20\%$, K = $\pm 10\%$ (J = $\pm 5\%$ upon request)
* Code number for required reel diameter: 9 = 180 mm, 6 = 330 mm
- 2) Other values upon request

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