


Construction

- Polar tantalum capacitors with solid electrolyte
- Conventional Ta-MnO₂ technology
- Flame-retardant plastic case (UL 94 V-0)
- Tinned terminals
- Maximum height 1,5 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
(recommended operating voltage see "General Technical Information", page 111, 4.4)
- Low ESR (version R)

Applications

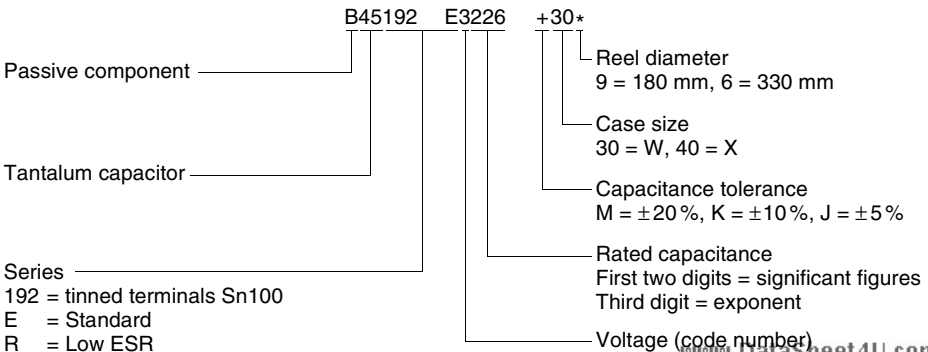
- Telecommunications (e.g. mobile phones, private branch exchanges)
- Data processing (e.g. laptops, main frames)
- Measuring and control engineering (e.g. voltage regulators)
- Automotive electronics
- Medical engineering
- Switch-mode power supplies with very high clock frequencies (300 kHz)
- DC/DC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

Soldering

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

Delivery mode

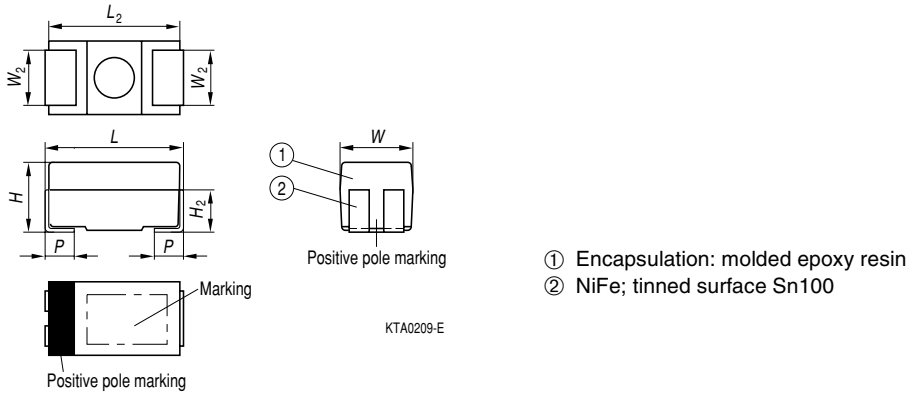
Taped and reeled in accordance with IEC 60286-3

Ordering code structure


Specifications and characteristics in brief

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

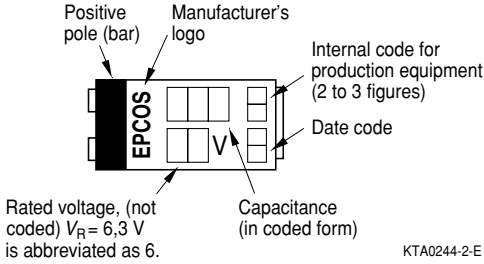
	Standard	Low ESR
Series	B45192E	B45192R
Technology	Ta-MnO ₂	Ta-MnO ₂
Terminals	Tinned	Tinned
Rated voltage V_R (up to 85 °C)	4 ... 16 Vdc	4 ... 16 Vdc
Rated capacitance C_R	22 ... 220 μ F	22 ... 220 μ F
Capacitance tolerance	$\pm 10\%$, $\pm 20\%$ $\pm 5\%$ (on request)	$\pm 10\%$, $\pm 20\%$ $\pm 5\%$ (on request)
Operating temperature	-55 ... +125 °C	-55 ... +125 °C
Failure rate	At 40 °C; $\leq V_R$, $R_S \geq 3 \Omega/V$ (1 fit = $1 \cdot 10^{-9}$ failures/h)	
$C_R \cdot V_R > 330 \mu F \cdot V$	≤ 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
ESR_{\max} (20 °C, 100 kHz)	—	200 ... 500 m Ω
IEC climatic category	To IEC 60068-1 55/125/56 (-55/+125 °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.	$p \pm 0,3$ $\pm(,012)$
W (30)	$6,0 \pm 0,3$ (,236 \pm ,012)	$3,2 \pm 0,3$ (,126 \pm ,012)	1,5 max (,059 mm)	5,8 (,228)	2,2 (,087)	1,1 (,043)	1,3 (,051)
X (40)	$7,3 \pm 0,3$ (,287 \pm ,012)	$4,3 \pm 0,3$ (,169 \pm ,012)	1,5 max (,059 mm)	7,1 (,280)	2,4 (,094)	1,1 (,043)	1,3 (,051)

Marking

Case sizes X, W


Capacitance coding

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

	Standard				Low ESR			
Series	B45192E				B45192R			
V_R (Vdc) up to 85 °C	4	6,3	10	16	4	6,3	10	16
C_R (μF)								
22				W				W
33				W				W
47			W				W	
68		W	W	X		W	W	X
100	W	W	X		W	W	X	
150	W	X			W	X		
220		X				X		

Technical data and ordering codes for B45192E

V_R up to 85 °C (up to 125 °C) Vdc	C_R μF	Case size	$\tan \delta_{\max}$ (20 °C, 120 Hz)	$I_{k, \max}$ (20 °C, V_R , 5 min) μA	Z_{\max} (20 °C, 100 kHz) Ω	Ordering code ¹⁾
4 (2,5)	100	W	0,08	4,0	1,4	B45192E0107+30*
	150	W	0,08	6,0	1,3	B45192E0157+30*
6,3 (4,0)	68	W	0,06	4,3	1,4	B45192E1686+30*
	100	W	0,08	6,3	1,2	B45192E1107+30*
	150	X	0,08	9,5	0,8	B45192E1157+40*
	220	X	0,08	14	0,8	B45192E1227+40*
10 (6,3)	47	W	0,06	4,7	1,4	B45192E2476+30*
	68	W	0,06	6,8	1,2	B45192E2686+30*
	68	X	0,06	6,8	1,2	B45192E2686+40*
	100	X	0,08	10	0,8	B45192E2107+40*
16 (10)	22	W	0,06	3,5	1,5	B45192E3226+30*
	33	W	0,06	5,3	1,4	B45192E3336+30*

Upon request

1) + Code letter for capacitance tolerance: M = ± 20 %, K = ± 10 % (J = ± 5 % upon request)
* Code number for reel diameter: 9 = 180 mm, 6 = 330 mm

Technical data and ordering codes for B45192R

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	$ESR_{\max}^{1)}$ (20°C, 100 kHz) $\text{m}\Omega$	I_{ac} (20°C, 100 kHz) A	Ordering code ²⁾
4 (2,5)	100	W	0,08	4,0	350	0,51	B45192R0107+30*
	150	W	0,08	6,0	350	0,51	B45192R0157+30*
6,3 (4,0)	68	W	0,06	4,3	400	0,47	B45192R1686+30*
	100	W	0,08	6,3	350	0,51	B45192R1107+30*
	150	X	0,08	9,5	250	0,66	B45192R1157+40*
	220	X	0,08	14	250	0,66	B45192R1227+40*
10 (6,3)	47	W	0,06	4,7	400	0,47	B45192R2476+30*
	68	W	0,06	6,8	300	0,55	B45192R2686+30*
	68	X	0,06	6,8	200	0,74	B45192R2686+40*
	100	X	0,08	10	200	0,74	B45192R2107+40*
16 (10)	22	W	0,06	3,5	500	0,42	B45192R3226+30*
	33	W	0,06	5,3	400	0,47	B45192R3336+30*

Upon request

1) Other values upon request

2) + Code letter for capacitance tolerance: M = ± 20 %, K = ± 10 % (J = ± 5 % upon request)

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

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