

**Solid Electrolyte Tantalum Chip Capacitor**

**AN018B-- CA45LR Series Low ESR SMD**

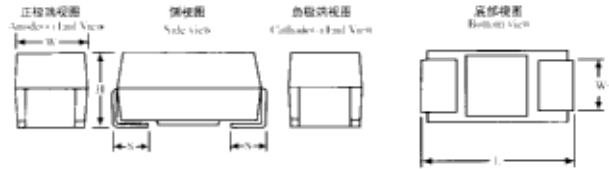


**Brief Introduction:**

The CA45LR Series is low ESR tantalum chip capacitor, suitable for SMT electric board used for telecommunication, computers, camcorder and mobile phone set and so on. Low ESR values conform with EIA535BAAC sizes. Taped and Reeled per E1A481-1

**Features:**

- Operating temperature Range: -55°C +125 C; (>85°C with rated voltage derating)
- Laser-marked Case
- Capacitance tolerance: 120%; + 10% (for special order);
- DC leakage at 25°C b o~ 0.01 C~U~ or 0.5pA( Whichever is greater).
- Dimensions, rated voltage and nominal capacitance: Please see Table 1 & 2 and Figure 1
- We can meet lead-free requirements requested by our customers who will stated specially when placing an order



**DIMENSIONS---Millimeters**

table 1

Unit mm

Case Size	L	W	H	S	Wi
S	2.0±0.2	1.30±0.2	1.20±0.2	0.5±0.3	1.2±0.1
A	3.2±0.2	1.6±0.2	1.6±0.2	0.8 ± 0.3	1.2±0.1
B	3.5± 0.2	2.8±0.2	1.9±0.2	0.8±0.3	2.2±0.1
C	6.0±0.3	3.2±0.3	2.5±0.3	1.3±0.3	2.2±0.1
D	7.3±0.3	4.3±0.3	2.8±0.3	1.3±0.3	2.4± 0.1
E	7.3± 0.3	4.3±0.3	4.0±0.3	1.3±0.3	2.4 ± 0.1

**Electrolyte Characteristics**

CA45LR Tantalum Chip Capacitor

Table2

Capacitance(uF)	Case Size	Part Number	DC leakage (uA@+25°CMax)	DF(%)@+25°C @ 125Hz Max	ESR(Ω)@*25°C @120KHz Max
<b>4 Volt Rating at+85°C (2.7Voit Rating+1 250)</b>					
3.3	A	cA45LR335M004AT	0.5	6.0	4.0
4.7	A	CA45LR475MOO4AT	0.5	6.0	3.5
6.8	A	CA45LR685M004AT	0.5	6.0	3.0
100	B	CA45LR106M004BT	0.5	60	1.2
10.0	A	CA45LR106M004AT	0.5	8.0	20
10.0	S	CA45LR106M004ST	0.5	60	60
15.0	B	CA45LR150M004BT	0.6	60	1.2
150	A	CA45LR156M004AT	0.6	60	15
22.0	C	CA45LR226M004CT	0.9	6.0	0.5
22.0	B	CA45LR226M004BT	0.9	6.0	0.6
22.0	A	CA45LR226M004AT	3.9	6.0	1.5
33.0	c	CA45LR336M004CT	1.3	6.0	0.5
330	B	CA45LA33EM004BT	1.3	6.0	0.5
33.0	A	CA45LR336M004AT	1.3	6.0	3.0
47.0	c	CA45LR476M004CT	1.9	6.0	0.5
47.0	B	cA45LR476M004BT	1.9	6.0	0.5
47.0	A	cA45LR476M004AT	1.9	12.0	2.0
68.0	0	CA45LR686M004DT	2.7	6.0	0.2
68.0	c	CA45LR686M004CT	2.7	6.0	0.25
68.0	B	CA45LR686M004BT	2.7	60	2.0
100.0	D	CA45LR107M004CT	40	80	0.2
100.0	C	CA45LR107M004CT	40	80	32
100.0	B	CA45LR107M004BT	40	100	0.6
1500	D	CA45LR157M004DT	6.0	83	0.15
1500	C	CA45LR157M004CT	6.0	83	0.3
220.0	D	CA45LR227M004CT	8.8	8.0	0.15
330.0	D	CA45LR227M004DT	13.2	80	0.15
470.0	E	CA45LR477M004ET	18.8	8.0	0.15
470.0	0	CA45LR477M004DT	18.8	8.0	0.15

CA45LR Series Solid Electrolyte Tantalum Chip Capacitor

**6.3Volt Rating at+85°C (4.0Volt Rating+125°C)**

Capacitance(uF)	Case Size	Part Number	DC leakage (uA@+25°CMax)	DF(%)@+25°C @125Hz Max	ESR(Ω)*25°C @120KHz Max
2.2	A	CA45LR225M006AT	0.5	6.0	6.0
3.3	A	CA45LR335M006AT	0.5	6.0	6.0
4.7	A	CA45LR475M006AT	0.5	6.0	3.5
6.8	B	CA45LR685M006BT	0.5	6.0	1.2
6.8	A	CA45LR685M006AT	0.5	6.0	2.0
6.8	S	CA45LR685M006ST	0.5	6.0	8.0
10.0	B	CA45LR106M006BT	0.6	6.0	1.0
10.0	A	CA45LR106M006AT	0.6	6.0	2.0
10.0	S	CA45LR106M006ST	0.6	8.0	6.0
150	C	CA45LR156M006CT	0.9	6.0	0.6
15.0	B	CA45LR146M006BT	0.9	6.0	0.7
15.0	A	CA45LR146M006AT	0.9	6.0	2.0
22.0	C	CA45LR226M006CT	1.4	6.0	0.5
22.0	B	CA45LR226M006BT	1.4	6.0	0.6
220	A	CA45LR226M006AT	1.4	6.0	3.0
33.0	C	CA45LR336M006CT	2.0	6.0	0.3
33.0	B	CA45LR336M006BT	2.0	6.0	0.6
33.0	A	CA45LR336M006AT	2.0	12.0	2.0
47.0	D	CA45LR476M006DT	2.9	6.0	0.22
47.0	C	CA45LR476M006CT	2.9	6.0	0.25
47.0	B	CA45LR476M006BT	2.9	6.0	2.0
68.0	0	CA45LR686M006DT	4.1	6.0	0.2
68.0	C	CA45LR686M006CT	4.1	6.0	0.2
1000	D	CA45LR107M006DT	6.0	8.0	0.15
1000	C	CA45LR107M006CT	6.0	8.0	0.3
1500	D	CA45LR157M006DT	9.0	8.0	0.15
150.0	C	CA45LR157M006CT	9.0	8.0	0.3
2200	F	CA45LR227M006ET	13.2	8.0	0.15
2200	D	CA45LR227M006DT	13.2	8.0	0.15
330.0	E	CA45LR337M006ET	19.8	8.0	0.15
3300	0	CA45LR337M006DT	19.8	8.0	0.15
4700	E	CA45LR477M006ET	28.2	10.0	0.10

CA45LR Series Solid Electrolyte Tantalum Chip Capacitor

**10Volt Rating at\*85°C (7.0Volt Rating+125°C)**

Capacitance(uF)	Case size	Part No.	DC leakage (uA@+25°CMax)	DF(%)@+25°C @ 125Hz Max	ESR(Ω)*25°C @ 120KHz Max
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1.5	A	CA45LR155M010AT	05	6.0	6.0
2.2	A	CA45LR225M010AT	05	6.0	6.0
3.3	A	CA45LR335M010AT	0.5	6.0	4.0
47	B	CA45LR476M010BT	0.5	6.0	1.5
4.7	A	CA45LR476M01 0AT	0.5	6.0	3.0
4.7	S	CA45LR475M010ST	0.5	8.0	8.0
6.8	B	CA45LR685M010BT	0.7	60	1.2
68	A	CA45LR685M010AT	0.7	6.0	3.0
100	C	CA45LR106M010CT	1.0	60	0.6
100	B	CA45LR106M010BT	1.0	60	08
10.0	A	CA45LR106M010AT	1.0	6.0	2.0
15.0	C	CA45LR156M010CT	1.5	6.0	05
15.0	B	CA45LR156M010BT	1.5	6.0	07
150	A	CA45LR156M010AT	1 5	8.0	40
220	C	CA45LR226M010CT	22	6.0	04
220	B	CA45LR226M010BT	22	6.0	07
330	D	CA45LR336M0100T	3.3	6.0	025
330	C	CA45LR336M010CT	3.3	6.0	0.3
330	B	CA45LR336M010BT	3,3	6.0	2.0
47.0	D	CA45LR476M0100T	4.7	6.0	0.22
47.0	C	CA45LR476M010CT	4.7	6.0	0.3
68.0	D	CA45LR686M0100T	6.8	6.0	0.2
68.0	C	CA45LR656M010CT	6.8	6.0	0.3
1000	D	CA45LR107M0100T	100	80	0.15
100.0	C	CA45LR107M010CT	100	80	0.3
1500	E	CA45LR157M010ET	150	80	015
1500	D	CA45LR157M010DT	15.0	8.0	015
220.0	E	CA45LR227M010ET	22.0	8.0	015
220.0	E	CA45LR227M01 0CT	22.0	8.0	015
330.0	E	CA4SLR337M010ET	33.0	10.0	010

CA45LR Series Solid Electrolyte Tantalum Chip Capacitor

Capacitance(uF)	Case Size	Part Number	DC leakage (uA@+25°CMax)	DF(%)+25°C @125Hz Max	ESR(Ω)*25°C @120KHz Max
<b>16Volt Rating at+85°C (10Volt Rating+125°C)</b>					
1.0	A	CA45LR105M016AT	05	4,0	6.0
1 5	A	CA45LR155M016AT	05	60	6.0
2.2	A	CA45LR225M016AT	05	6.0	40
2.2	S	CA45LR225MW 6ST	0 5	8.0	20.0
3.3	A	CA45LR335M01 6AT	0 5	6.0	4.0
3.3	B	CA45LR335M016BT	05	60	2.0
4.7	B	CA45LR475M01 6BT	0 8	6.0	1 .5
4 7	A	CA45LR475M01 6AT	0 8	6.0	3.0
6 8	C	CA45LR685M01 6CT	1 1	6.0	0 8
6.8	B	CA45LR685M016BT	1 1	6.0	1.2
6.8	A	CA45LR685M01 6AT	11	6.0	3 0
10.0	C	CA45LR106M016CT	1,6	6.0	06
10.0	B	CA45LR106M016BT	1.6	6.0	08
15.0	C	CA45LR156M016AT	24	6.0	04
15.0	B	CA45LR156M016BT	2,4	6.0	08
22.0	D	CA45LR226M016DT	3.6	6.0	025
22.0	C	CA45LR226M016CT	3.6	6.0	035
33.0	D	CA45LR336M016DT	53	6.0	025
33.0	C	CA45LR336M016CT	5.3	6.0	03
47.0	0	CA45LR476M016DT	7.5	6.0	0.2
47.0	C	CA45LR476M016CT	7.5	6.0	0.55
68.0	D	CA45LR686M016DT	10.9	6.0	015
100.0	F	CA45LR107M016ET	16.0	8.0	015
100,0	D	CA45LR107M016DT	16.0	5.ü	0.15
150.0	E	CA45LR157M016ET	24.0	8.0	015
<b>20Volt Rating at+85°C (13Volt Rating+125°C)</b>					
0.68	A	CA45LR684M020AT	0.5	40 80	
1.0	A	CA45LR105M020AT	0.5	43	55
1.5	A	CA45LR155M020AT	05	60	45
2.2	B	CA45LR225M020BT	0.5	6 0	1 5
2.2	A	CA45LR225M020AT	0.5	6 0	4 0
33	B	CA45LR335M020BT	0,7	6 0	1 3
33	A	CA45LR335M020AT	0.7	6 0	4 0
47	C	CA45LR475M020CT	1 .0	6 0	0 6
4 7	B	CA45LR475M020BT	1 .0	6 0	1 0
4 7	A	CA45LR475M020AT	1 .0	6 0	3 5
6 8	C	CA45LR685M020CT	1 .4	6 0	C 6
5 5	B	CA45LR685M020BT	1 4	6 0	1 C

100	C	CA45LR106M020CT	2.0	60	05
100	B	CA45LR106M020BT	20	60	1.0
150	0	CA45LR156M0200T	30	60	035
150	C	CA45LR156M020CT	30	60	0.4
22.0	0	CA45LR226M0200T	4 4	6 0	0.3
22.0	C	CA45LR226M020CT	4 4	6.0	0.4
33.0	0	CA45LR336M0200T	6 6	6.0	0.25
33.0	C	CA45LR336M020CT	6 6	6.0	0.4
47.0	D	CA45LR476M020DT	9 4	6 C	0.2
68.0	F	CA45LR686M020ET	1 3 6	6.0	0.2
68.0	D	CA45LR686M020DT	1 3 6	8 0	0 2
100.0	F	CA45LR687M020ET	20 0	8.0	0 15

Capacitance(uF)	Case Size	Part Number	DC leakage (uA@+25°CMax)	DF(%)@+25°C @125Hz Max	ESR(Ω)*25°C @120KHz Max
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**25Volt Rating at+85°C (17VoIt Rating+125°C)**

0.33	A	CA45LR334M025AT	0.5	4.0	10.0
0.47	A	CA45LR474M025AT	0.5	4.0	9.0
0.68	A	CA45LR684M025AT	0.5	4.0	6.0
1.0	B	CA45LR105M025BT	0.5	4.0	2.0
1.0	A	CA45LR1Q5M025AT	0.5	4.0	4.0
1.5	B	CA45LR155M025BT	0.5	6.0	1.5
1.5	A	CA45LR155M025AT	0.5	6.0	5.0
2.2	C	CA45LR225M025CT	0.6	6.0	1.2
2.2	B	CA45LR225M025BT	0.6	6.0	2.2
3.3	C	CA45LR335M025CT	0.9	6.0	1.2
3.3	B	CA45LR335M025BT	0.9	6.0	2.0
4.7	C	CA45LR475M025CT	1.2	6.0	0.6
4.7	B	CA45LR475M025BT	1.2	6.0	1.0
6.8	C	CA45LR685M025CT	1.7	6.0	0.6
10.0	0	CA45LR106M025DT	2.5	6.0	0.4
10.0	C	CA45LR106M025CT	2.5	6.0	0.6
15.0	D	CA45LR156M025DT	3.8	6.0	0.4
15.0	C	CA45LR156M025CT	3.8	6.0	0.9
22.0	0	CA45LR226M025DT	5.5	6.0	0.4
33.0	E	CA45LR336M025ET	8.3	6.0	0.3
33.0	D	CA45LR336M025DT	8.3	6.0	0.4
47.0	F	CA45LR476M025ET	11.8	6.0	03

**35Volt Rating at+85°C (23Volt Rating+125°C)**

0.1	A	CA45LR104M035AT	0.5	4.0	100
0.15	A	CA45LR154M035AT	0.5	4.0	6.0
0.22	A	CA45LR224M035AT	0.5	4.0	6.0
0.33	A	CA45LR334M035AT	0.5	4.0	6.0
0.47	B	CA45LR474M035BT	0.5	4.0	2.5

0.47	A	CA45LR474M035AT	0.5	4.0	4.0
0.68	B	CA45LR684M035BT	0.5	4.0	2.5
0.68	A	CA45LR684M035AT	0.5	4.0	6.0
1.0	B	CA45LR105M035BT	0.5	4.0	2.0
1.0	A	CA45LR105M035AT	0.5	4.0	6.0
1.5	C	CA45LR155M035CT	0.5	6.0	2.5
1.5	B	CA45LR155M035BT	0.5	6.0	3.0
2.2	C	CA45LR225M035CT	0.8	6.0	1.5
2.2	B	CA45LR225M035BT	0.8	6.0	2.5
3.3	C	CA45LR335M035CT	1.2	8.0	0.8
3.3	B	CA45LR335M035BT	1.2	6.0	2.0
4.7	D	CA45LR475M035DT	1.7	6.0	0.7
4.7	C	CA45LR475M035CT	1.7	6.0	0.7
6.8	0	CA45LR685M03501	2.4	6.0	0.5
6.8	C	CA45LR685M035CT	2.4	6.0	0.9
10.0	D	CA45LR106M035DT	3.5	6.0	0.4
10.0	C	CA45LR106M035CT	3.5	6.0	1.2
15.0	E	CA45LR156M035ET	5.3	6.0	0.3
15.0	D	CA45LR156M035DT	5.3	6.0	0.35
22.0	E	CA45LR226M035ET	7.7	6.0	0.3
22.0	0	CA45LR226M035DT	7.7	6.0	0.4

Capacitance(uF)	Case Size	Part Number	DC leakage (uA@+25°CMax)	DF(%)@+25°C @125Hz Max	ESR(Ω)@*25°C @120KHz Max
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**50Volt Rating at+85°C (30Volt Rating+ 125°C)**

0.1	A	CA45LR104M050AT	0.5	4.0	100
0.15	B	CA45LR154M050BT	0.5	4.0	100
0.15	A	CA45LR154M050AT	0.5	4.0	100
0.22	B	CA45LR224M050BT	0.5	4.0	100
0.33	B	CA45LR334M050BT	0.5	4.0	2.5
0.47	C	CA45LR474M050CT	0.5	4.0	1.8
0.47	B	CA45LR474M050BT	0.5	4.0	2.0
0.68	C	CA45LR684M050CT	0.5	4.0	1.6
0.68	B	CA45LR684M050BT	0.5	4.0	3.0
1.0	C	CA45LR105M050CT	0.5	4.0	1.6
1.5	D	CA45LR155M050DT	0.8	6.0	1.0
1.5	C	CA45LR155M050CT	0.8	6.0	1.5
2.2	0	CA45LFI225M0500T	1.1	6.0	0.8
2.2	C	CA45LR225M050CT	1.1	6.0	1.5
3.3	0	CA45LR335M050DT	1.7	6.0	0.8
4.7	D	CA45LR475M050DT	2.4	6.0	0.6
6.8	E	CA45LR685M050ET	3.5	6.0	0.5