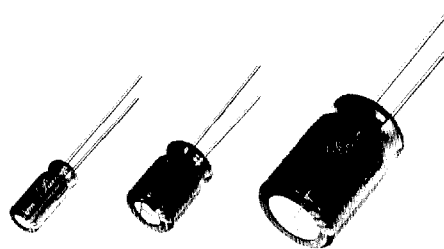


Series PZ

Features

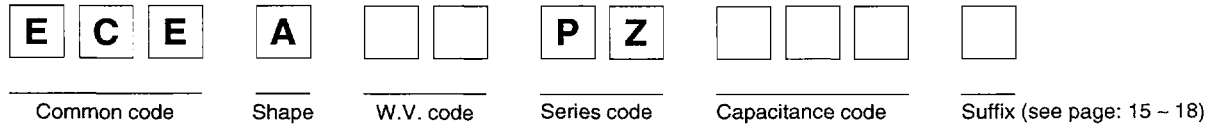
- For audio applications
- Low noise, low distortion
- Mid-low range mellow sound and good sustain.



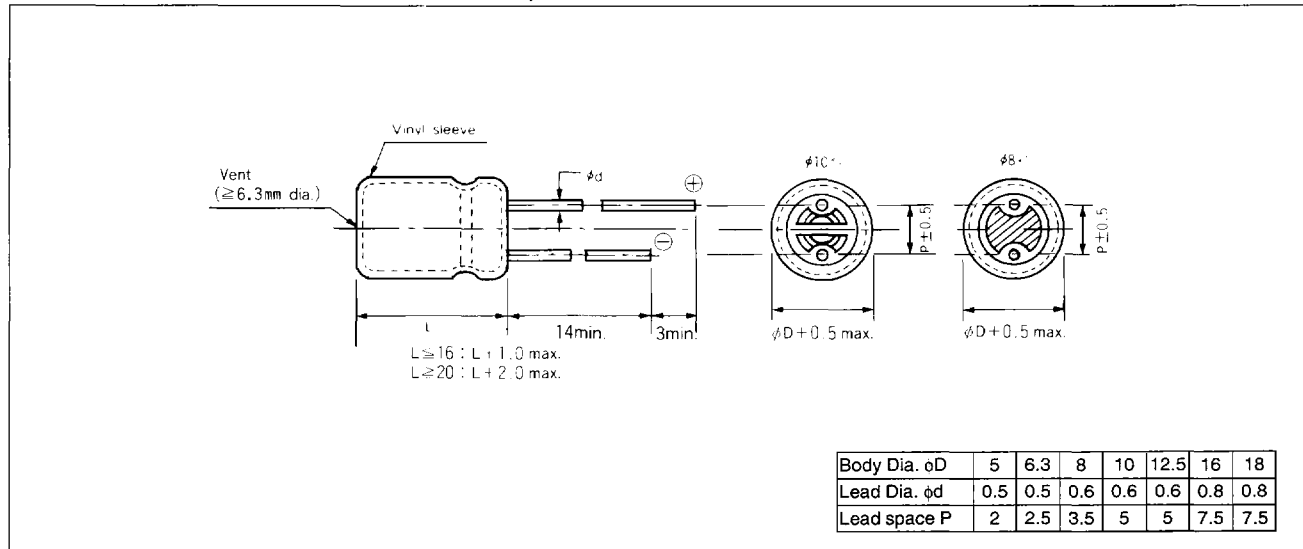
Specifications

Item	Performance Characteristics																		
Operating Temperature Range	-40 to +85°C																		
Rated Working Voltage Range	6.3 to 100V DC																		
Nominal Capacitance Range	0.47 to 10000µF																		
Capacitance Tolerance	±20% (120Hz/+20°C)																		
Leakage Current	$I \leq 0.01V$ or $3[\mu A]$ Whichever is greater measured after 2 minutes application of rated working voltage at +20°C.																		
tan δ (120Hz, +20°C)	<table border="1"> <thead> <tr> <th>Working voltage [V]</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>tan δ max.</td> <td>0.28</td> <td>0.24</td> <td>0.20</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.13</td> <td>0.12</td> </tr> </tbody> </table>	Working voltage [V]	6.3	10	16	25	35	50	63	100	tan δ max.	0.28	0.24	0.20	0.18	0.16	0.14	0.13	0.12
Working voltage [V]	6.3	10	16	25	35	50	63	100											
tan δ max.	0.28	0.24	0.20	0.18	0.16	0.14	0.13	0.12											
Endurance	Test conditions Duration : 1000hours Ambient temperature : +85°C Applied voltage : Rated DC working voltage Post test requirements at +20°C Leakage current : ≤ Initial specified value Capacitance change : ±20% of initial measured value tan δ : ≤ 200% of Initial specified value																		
Shelf Life	Test conditions Duration : 1000hours Ambient temperature : +85°C Applied voltage : (None) Post test requirements at +20°C Same limits for "Endurance".																		

Explanation of Part Numbers



Dimensions in mm (not to scale)



Case Size

W.V. [V.DC] Cap. [μF]	6.3 (0J)	10 (1A)	16 (1C)	25 (1E)	35 (1V)	50 (1H)	63 (1J)	100 (2A)
0.47 (R47)						5 × 11		5 × 11
1.0 (010)						5 × 11		5 × 11
2.2 (2R2)						5 × 11		5 × 11
3.3 (3R3)						5 × 11		5 × 11
4.7 (4R7)					5 × 11	5 × 11	5 × 11	6.3 × 11.2
10 (100)			5 × 11	5 × 11	5 × 11	5 × 11	6.3 × 11.2	8 × 11.5
22 (220)			5 × 11	5 × 11	6.3 × 11.2	6.3 × 11.2	8 × 11.5	10 × 12.5
33 (330)	5 × 11	5 × 11	5 × 11	6.3 × 11.2	6.3 × 11.2	8 × 11.5	8 × 11.5	10 × 16
47 (470)	5 × 11	5 × 11	6.3 × 11.2	6.3 × 11.2	8 × 11.5	8 × 11.5	10 × 12.5	10 × 20
100 (101)	6.3 × 11.2	6.3 × 11.2	8 × 11.5	8 × 11.5	10 × 12.5	10 × 16	10 × 20	12.5 × 20
220 (221)	8 × 11.5	8 × 11.5	10 × 12.5	10 × 16	10 × 20	12.5 × 20	12.5 × 20	16 × 25
330 (331)	10 × 12.5	10 × 12.5	10 × 16	10 × 20	12.5 × 20	12.5 × 20	12.5 × 25	16 × 31.5
470 (471)	10 × 12.5	10 × 16	10 × 20	12.5 × 20	12.5 × 25	16 × 25	16 × 25	18 × 35.5
1000 (102)	10 × 20	12.5 × 20	12.5 × 25	16 × 25	16 × 25	16 × 31.5	18 × 35.5	
2200 (222)	12.5 × 25	16 × 25	16 × 25	16 × 35.5	18 × 35.5			
3300 (332)	16 × 25	16 × 31.5	16 × 35.5	18 × 35.5				
4700 (472)	16 × 31.5	16 × 35.5	18 × 35.5					
6800 (682)	16 × 35.5	18 × 40						
10000 (103)	18 × 40							

*() shows W.V. and capacitance code.

Standard Products

W.V. [V.DC]	Cap. [μF]	Part No.	Cap.tol. [%] (120Hz/+20°C)	D.C.L. (+20°C/2min) [μA] max.	tan δ (120Hz/+20°C) max.	Ripple current (120Hz/+85°C) [mA] rms max.	Dimensions [mm]	
							φD	L
6.3	33	ECEA0JPZ330	±20	3.0	0.28	40	5	11
	47	ECEA0JPZ470		3.0	0.28	60	5	11
	100	ECEA0JPZ101		6.3	0.28	130	6.3	11.2
	220	ECEA0JPZ221		13.8	0.28	240	8	11.5
	330	ECEA0JPZ331		20.7	0.28	300	10	12.5
	470	ECEA0JPZ471		29.6	0.28	380	10	12.5
	1000	ECEA0JPZ102		63.0	0.28	580	10	20
	2200	ECEA0JPZ222		138.6	0.30	890	12.5	25
	3300	ECEA0JPZ332		207.9	0.32	1020	16	25
	4700	ECEA0JPZ472		296.1	0.34	1170	16	31.5
	6800	ECEA0JPZ682		428.4	0.38	1270	16	35.5
	10000	ECEA0JPZ103		630.0	0.46	1450	18	40
10	33	ECEA1APZ330	±20	3.3	0.24	60	5	11
	47	ECEA1APZ470		4.7	0.24	90	5	11
	100	ECEA1APZ101		10.0	0.24	150	6.3	11.2
	220	ECEA1APZ221		22.0	0.24	250	8	11.5
	330	ECEA1APZ331		33.0	0.24	330	10	12.5
	470	ECEA1APZ471		47.0	0.24	400	10	16
	1000	ECEA1APZ102		100.0	0.24	630	12.5	20
	2200	ECEA1APZ222		220.0	0.26	920	16	25
	3300	ECEA1APZ332		330.0	0.28	1090	16	31.5
	4700	ECEA1APZ472		470.0	0.30	1200	16	35.5
6800	ECEA1APZ682	680.0	0.34	1400	18	40		
16	10	ECEA1CPZ100	±20	3.0	0.20	30	5	11
	22	ECEA1CPZ220		3.5	0.20	75	5	11
	33	ECEA1CPZ330		5.2	0.20	110	5	11
	47	ECEA1CPZ470		7.5	0.20	130	6.3	11.2
	100	ECEA1CPZ101		16.0	0.20	180	8	11.5
	220	ECEA1CPZ221		35.2	0.20	280	10	12.5
	330	ECEA1CPZ331		52.8	0.20	350	10	16
	470	ECEA1CPZ471		75.2	0.20	440	10	20
	1000	ECEA1CPZ102		160.0	0.20	680	12.5	25
	2200	ECEA1CPZ222		352.0	0.22	1000	16	25
	3300	ECEA1CPZ332		528.0	0.24	1200	16	35.5
4700	ECEA1CPZ472	752.0	0.26	1360	18	35.5		
25	10	ECEA1EPZ100	±20	3.0	0.18	50	5	11
	22	ECEA1EPZ220		5.5	0.18	90	5	11
	33	ECEA1EPZ330		8.2	0.18	110	6.3	11.2
	47	ECEA1EPZ470		11.7	0.18	130	6.3	11.2
	100	ECEA1EPZ101		25.0	0.18	180	8	11.5
	220	ECEA1EPZ221		55.0	0.18	310	10	16
	330	ECEA1EPZ331		82.5	0.18	390	10	20
	470	ECEA1EPZ471		117.5	0.18	480	12.5	20
	1000	ECEA1EPZ102		250.0	0.18	850	16	25
	2200	ECEA1EPZ222		550.0	0.20	1200	16	35.5
	3300	ECEA1EPZ332		825.0	0.22	1200	18	35.5

Standard Products

W.V. [V.DC]	Cap. [μF]	Part No.	Cap.tol. [%] (120Hz/+20°C)	D.C.L. (+20°C/2min) [μA] max.	Tan δ (120Hz/+20°C) max.	Ripple current (120Hz/+85°C) [mA] rms max.	Dimensions [mm]	
							φD	L
35	4.7	ECEA1VPZ4R7	±20	3.0	0.16	35	5	11
	10	ECEA1VPZ100		3.5	0.16	60	5	11
	22	ECEA1VPZ220		7.7	0.16	95	6.3	11.2
	33	ECEA1VPZ330		11.5	0.16	110	6.3	11.2
	47	ECEA1VPZ470		16.4	0.16	130	8	11.5
	100	ECEA1VPZ101		35.0	0.16	210	10	12.5
	220	ECEA1VPZ221		77.0	0.16	350	10	20
	330	ECEA1VPZ331		115.5	0.16	440	12.5	20
	470	ECEA1VPZ471		164.5	0.16	550	12.5	25
	1000	ECEA1VPZ102		350.0	0.16	900	16	25
	2200	ECEA1VPZ222		770.0	0.18	1250	18	35.5
50	0.47	ECEA1HPZR47	±20	3.0	0.14	5	5	11
	1.0	ECEA1HPZ010		3.0	0.14	10	5	11
	2.2	ECEA1HPZ2R2		3.0	0.14	20	5	11
	3.3	ECEA1HPZ3R3		3.0	0.14	35	5	11
	4.7	ECEA1HPZ4R7		3.0	0.14	45	5	11
	10	ECEA1HPZ100		5.0	0.14	65	5	11
	22	ECEA1HPZ220		11.0	0.14	100	6.3	11.2
	33	ECEA1HPZ330		16.5	0.14	110	8	11.5
	47	ECEA1HPZ470		23.5	0.14	130	8	11.5
	100	ECEA1HPZ101		50.0	0.14	250	10	16
	220	ECEA1HPZ221		110.0	0.14	400	12.5	20
	330	ECEA1HPZ331		165.0	0.14	500	12.5	20
	470	ECEA1HPZ471		235.0	0.14	650	16	25
	1000	ECEA1HPZ102		500.0	0.14	1050	16	31.5
63	4.7	ECEA1JPZ4R7	±20	3.0	0.13	45	5	11
	10	ECEA1JPZ100		6.3	0.13	70	6.3	11.2
	22	ECEA1JPZ220		13.8	0.13	105	8	11.5
	33	ECEA1JPZ330		20.7	0.13	130	8	11.5
	47	ECEA1JPZ470		29.6	0.13	160	10	12.5
	100	ECEA1JPZ101		63.0	0.13	270	10	20
	220	ECEA1JPZ221		138.6	0.13	450	12.5	20
	330	ECEA1JPZ331		207.9	0.13	550	12.5	25
	470	ECEA1JPZ471		296.1	0.13	750	16	25
	1000	ECEA1JPZ102		630.0	0.13	1100	18	35.5
100	0.47	ECEA2APZR47	±20	3.0	0.12	10	5	11
	1.0	ECEA2APZ010		3.0	0.12	20	5	11
	2.2	ECEA2APZ2R2		3.0	0.12	30	5	11
	3.3	ECEA2APZ3R3		3.3	0.12	40	5	11
	4.7	ECEA2APZ4R7		4.7	0.12	50	6.3	11.2
	10	ECEA2APZ100		10.0	0.12	70	8	11.5
	22	ECEA2APZ220		22.0	0.12	115	10	12.5
	33	ECEA2APZ330		33.0	0.12	145	10	16
	47	ECEA2APZ470		47.0	0.12	180	10	20
	100	ECEA2APZ101		100.0	0.12	350	12.5	20
	220	ECEA2APZ221		220.0	0.12	350	16	25
	330	ECEA2APZ331		330.0	0.12	700	16	31.5
	470	ECEA2APZ471		470.0	0.12	900	18	35.5