

- High Temperature Radial Type, 105°C, 2000 hours assured Load Life.
- Applications: Communications equipment, switching regulators, and industrial applications.

Characteristics

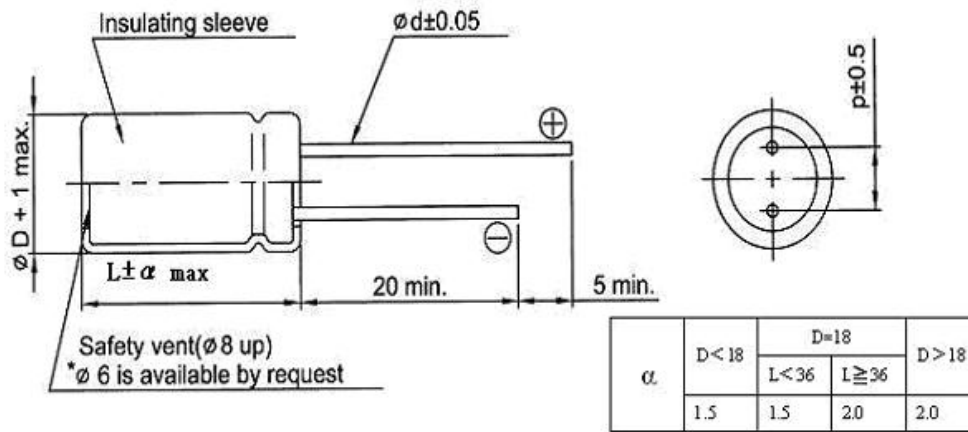
Voltage Range	6.3 to 100 VDC				160 to 450 VDC				
Capacitance Range	0.47 to 10000uF				0.47 to 220uF				
Temperature Range	-40 to +105°C				-25 to +105°C				
Capacitance Tolerance	±20% at 120Hz, 20°C (10% Tol. is available upon request)								
Leakage Current	I≤0.01CV or 3uA, whichever is greater 2 minutes after Rated Voltage applied				I≤0.03CV or 3uA, whichever is greater 2 minutes after Rated Voltage applied				
Dissipation Factor	Rated Voltage (V)	6.3	10	16	25	35	50	63	
	Dissipation Factor(tanδ)max	0.22	0.20	0.16	0.14	0.12	0.10	0.09	
	Rated Voltage (V)	100	160	200	250	350	400	450	
	Dissipation Factor(tanδ)max	0.08	0.15	0.15	0.20	0.20	0.24	0.24	
For capacitance > 1000uF, add 0.02 for every 1000uF, (at 20°C, 120Hz)									
Stability at Low Temperature	Impedance ration at 120Hz								
	Rated Voltage (V)	6.3V	10V	16V	25-100V	160-250V	350-400V	450V	
	Z-25°C/Z 20°C	4	3	2	2	3	6	15	
Z-40°C/Z 20°C	8	6	4	3	—	—	—		
Load Life	After the rated voltage has been applied for 2000 hours at 105°C		Capacitance change		Within ±20% of initial value				
			D.F. tanδ		150% or less of initial specified value				
			Leakage current		Less than initial specified value				
Shelf Life	After storage for 1000 hours at 105°C with no voltage applied, the capacitor shall meet the specified limit in load life. Pre-treatment for measurement shall be conducted after application of DC working voltage for 30 minutes.								

Case Size of Standard Products & Maximum Ripple Current (mA rms 105°C 120Hz)

Cap. ^{wv}	6.3V		10V		16V		25V		35V		50V		63V	
	Size	R.C.	Size	R.C.	Size	R.C.	Size	R.C.	Size	R.C.	Size	R.C.	Size	R.C.
0.47											5x11	8	5x11	8
1											5x11	12	5x11	12
2.2											5x11	20	5x11	20
3.3											5x11	25	5x11	28
4.7											5x11	30	5x11	34
10					5x11	35	5x11	38	5x11	41	5x11	46	5x11	50
22					5x11	54	5x11	57	5x11	61	5x11	68	6.3x11	82
33					5x11	64	5x11	69	5x11	75	6.3x11	90	6.3x11	100
47			5x11	70	5x11	100	5x11	105	6.3x11	110	6.3x11	125	8x12	135
100	5x11	95	5x11	105	5x11	125	6.3x11	135	8x12	170	8x12	180	10x13	225
220	5x11	160	6.3x11	175	6.3x11	215	8x12	230	10x13	300	10x16	345	10x21	400
330	6.3x11	195	8x12	245	8x12	260	10x13	335	10x16	400	10x21	460	13x21	540
470	6.3x11 8x12	230 270	8x12	290	8x12 10x13	310 370	10x13 10x16	410 440	10x21	520	10x21 13x21	600 610	13x26	700
1000	10x13	460	10x13	550	10x16 10x21	590 640	10x21 13x21	710 770	13x26	920	16x26	1080	16x32	1210
2200	10x21	810	10x21	860	13x21	1000	13x26 16x26	1090 1170	16x26 16x32	1290 1350	16x36 16x32	1530	18x36	1610
3300	13x21	960	13x21	1100	16x26	1300	16x26	1460	16x36	1650	18x36	1750		
4700	13x26	1330	13x26	1350	16x26	1600	16x36	1780	18x36	1900	22x41	2500		
6800	13x26	1450	16x26	1670	16x32	1900	18x36	1950						
10000	16x26	1680	16x36	1900	18x36	2060								

Cap. uF	100V		160V		200V		250V		350V		400V		450V	
	Size	R.C.	Size	R.C.	Size	R.C.	Size	R.C.	Size	R.C.	Size	R.C.	Size	R.C.
0.47	5x11	10	5x11	12	5x11	12	5x11	12	6.3x11	13	6.3x11	14	6.3x11	14
1	5x11	15	6.3x11	17	6.3x11	17	6.3x11	17	6.3x11	20	8x12	20	8x12	20
2.2	5x11	23	6.3x11	25	6.3x11	25	8x12	29	8x12	35	10x13	35	10x13	35
3.3	5x11	32	6.3x11	32	8x12	35	8x12	42	10x13	47	10x13	47	10x16	54
4.7	5x11	37	8x12	42	8x12	50	10x13	50	10x16	55	10x16	55	10x21	60
10	6.3x11	56	10x13	59	10x16	60	10x16	64	10x21	79	10x21 13x21	80 110	13x26	87
22	8x12	96	10x16	105	10x16 10x21	105 130	10x21 13x21	110 140	13x21 13x26	130 160	13x26 16x26	145 160	16x26 16x32	165
33	10x13	120	10x21	125	13x21	140	13x21	140	16x26	195	16x26	195	16x36	210
47	10x16	160	13x21	165	13x26	165	13x26 16x26	180 220	16x32	230	16x32 16x36	250 275	16x36 18x32	260 290
100	13x21	245	13x26 16x26	270 310	16x26	285	16x32	365	18x36	375	18x36	360		
220	13x26 16x26	450 520	16x36	480	18x36	550	22x36	550						
330	16x26	690	18x36	705										
470	16x32	860	18x41	860										

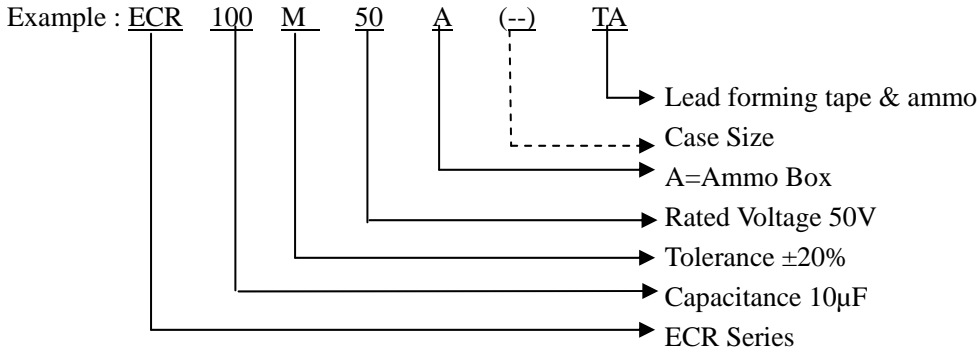
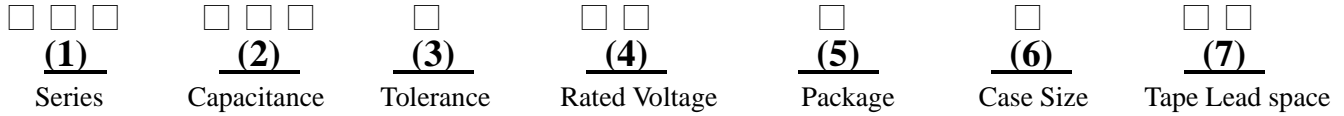
Diagram of dimensions (mm)



D ϕ	5	6.3	8	10	13	16	18	22	25
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	12.5
d ϕ	0.5			0.6		0.8		1.0	1.0

Part Numbering System

When you place an order for HITANO electrolytic capacitors, please refer to our part number as shown below.



(1) Series:

Series is represented by three digit code. Please refer to “Series Table” on page 3

(2) Capacitance:

Rated capacitance in μF is represented by a three digit number. The first two digits are the significant figures of the nominal capacitance and the third digit indicates the number of zeros following these figures. The decimal point is represented by the capital letter R. Please refer to the following example:

μF	0.1	0.47	1	4.7	10	47	100	470	1000	4700	10000
Part number	0R1	R47	010	4R7	100	470	101	471	102	472	103

(3) Tolerance:

Symbol of M and K show special capacitance tolerance which are listed as follows:

K = -10% ~ +10%	M = -20% ~ +20%
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(4) Rated Voltage:

Voltage on volts (V) is represented by two digit code showing the real working voltage indicated as follows:

Voltage(WV)	2.5	4	6.3	10	16	20	25	35	40	50	63	80	100	160	200	250	350	400	450
Code	0E	0G	0J	10	16	20	25	35	40	50	63	80	2A	2C	2D	2E	2V	2G	2W

(5) Package:

B = Bulk ;	
C5 = Lead Cutting 5mm & Loose Package	AC5= Smaller Size With Cutting 5mm
A = Tape & Ammo Package	R = Tape & Reel Package
F5 = Lead Forming & Cutting 5mm & Loose Package	

(6) Case Size:(Omit if only One size.)

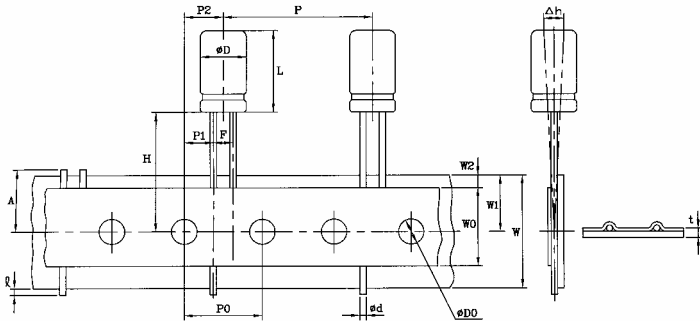
EVS ,ERS = Apply Size Code	V-CHIP = Apply Size Code
Snap In Type= Apply Size Code	A=Smaller Size For Bulk
S= Customized Size	

(7) Lead Space (Omit if Loose Package)on page 31

T1 = Lead space 2.5mm Tape(d=4 or 5 Forming)	TA = Lead Forming space 5mm Tape
T3 = Lead space 7.5mm Tape	T2 = Lead space 5mm Tape
T35= Lead space 3.5mm Tape	

RADIAL TAPING FOR AUTOMATIC INSERTION

DRAWING I CODE T1 Lead space 2.5mm

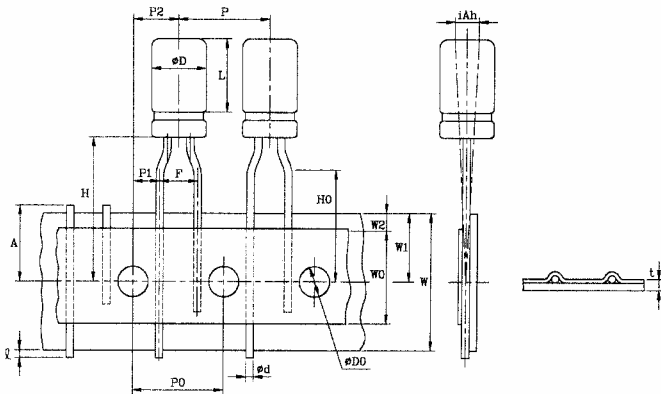


Body Dia	φ 3, φ 4, φ 5, φ 6.3	(mm)
Symbol	Dimension	Tolerance
P	12.7	±1.0
P ₀	12.7	±0.3
P ₂	6.35	±1.0
F	2.5	±0.5
Δ _h	0	±2.0
W	18.0	±0.5
W ₀	12.5	min.
W ₁	9.0	±0.5
W ₂	2.0	max.
H	18.5	±0.75
H ₀	16.0	±0.5
ℓ	2.0	max.
ψD ₀	4.0	0.2
t	0.7	0.5
A	11.10	max.
L	7.11	+ 10

I PACKAGING

φ D	Q'TY	BOX	REEL
3	3,000	2,000	2,000
4	2,500	1,700	1,700
5	2,000	1,300	1,300
6.3	1,500	1,000	1,000

DRAWING II CODE TA Lead space 5mm

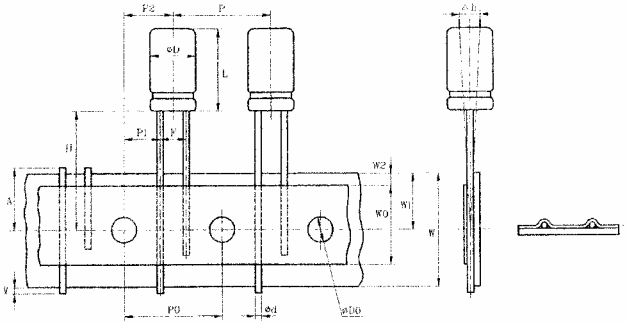


Body Dia	φ 3, φ 4, φ 5, φ 6.3, φ 8	(mm)
Symbol	Dimension	Tolerance
P	12.7	±1.0
P ₀	12.7	±0.3
P ₂	6.35	±1.0
F	5.0	±0.5
Δ _h	0	±2.0
W	18.0	±0.5
W ₀	12.5	min.
W ₁	9.0	±0.5
W ₂	2.0	max.
H	18.5	±0.75
H ₀	16.0	±0.5
ℓ	2.0	max.
ψD ₀	4.0	0.2
t	0.7	0.5
A	11.0	max.
L	7,11,11	+ 10

I PACKAGING

φ D	Q'TY	BOX	REEL
3	3,000	2,000	2,000
4	2,500	1,700	1,700
5	2,000	1,300	1,300
6.3	1,500	1,000	1,000
8	1,000	750	750

DRAWING III CODE T2 Lead space 5mm

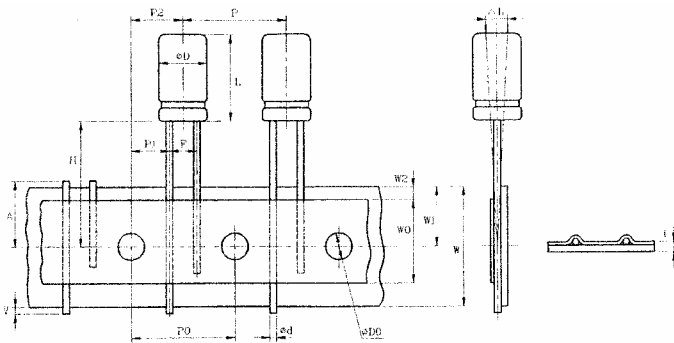


PACKAGING :

ϕD \ Q'TY	BOX	REEL
10	500	500
13	300	-

Symbol	Dimension		Tolerance
	$\phi 10$	$\phi 13$	
P	12.7	15	+1
P ₀	12.7	15	+ 0.3
P ₂	6.35	7.5	+ 1.0
F	5.0	5.0	± 0.5
Δ_h	0	0	+ 2.0
W	18.0	18.0	+ 0.5
W ₀	12.5	12.5	min.
W ₁	9.0	9.0	+ 0.5
W ₂	2.0	2.0	max.
H	18.5	18.5	+ 0.75
H ₀	2.0	2.0	max.
ℓ	4.0	4.0	+ 0.2
ψD_o	0.7	0.7	+ 0.5
t	11.0	11.0	max.
A	0.6	0.6	± 0.05
L	12.5,16,21	21,26	+ 1.5

DRAWING IV CODE T3 Lead space 7.5mm



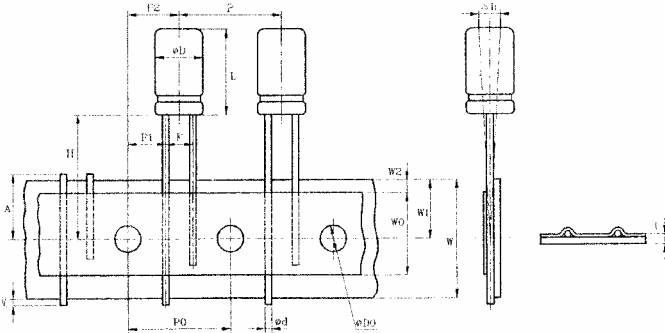
PACKAGING :

ϕD \ Q'TY	BOX
16	300

Symbol	Dimension	Tolerance
	$\phi 16$	
P	30.0	+ 1.0
P ₀	15.0	+ 0.3
P ₂	7.5	+ 1.0
F	7.5	± 5.0
Δ_h	0	+ 2.0
W	18.0	+ 0.5
W ₀	12.5	min.
W ₁	9.0	+ 0.5
W ₂	2.0	max.
H	18.5	+ 0.75
ℓ	2.0	2.0
ψD_o	4.0	+ 0.2
t	0.7	+ 0.2
A	11.0	max.
fd	0.8	+ 0.05
L	26,31	

RADIAL TAPING FOR AUTOMATIC INSERTION

DRAWING V CODE T35 Lead space 3.5mm



Symbol	Dimension	Tolerance
	φ 8	
P	12.7	+ 1.0
P ₀	12.7	+ 0.3
P ₂	6.35	+ 1.0
F	3.5	± 0.5
Δ _h	0	+ 2.0
W	18.0	±0.5
W ₀	12.5	min.
W ₁	9.0	+ 0.5
W ₂	2.0	max.
H	18.5	+ 0.75
t	2.0	max.
fD ₀	4.0	+ 0.2
t	0.7	+ 0.5
A	11.0	max.
fd	0.6	±0.05
L	12,14,16	+ 1.5

I PACKAGING

Q'TY	BOX	REEL
φ D		
8	1000	750

PACKAGE & WEIGHT

RADIAL TYPE, BULK PACKAGE

SEQ	DIMENSION	ONE BAG	INNER BOX	CARTON	KGS/CTN
1	3X5mm	2000 pcs	16K pcs	64 K pcs	16 Kgs
2	4mm	2000 pcs	16K pcs	64 K pcs	18 Kgs
3	5mm	1000 pcs	10 K pcs	40 K pcs	20 Kgs
4	6.3mm	1000 pcs	8 K pcs	32 K pcs	22 Kgs
5	8x5mm	1000 pcs	8 K pcs	32 K pcs	22 Kgs
6	8x12mm	1000 pcs	5 K pcs	20 K pcs	22 Kgs
7	8x14mm	1000 pcs	5 K pcs	20 K pcs	24 Kgs
8	8x16mm	1000 pcs	4 K pcs	16 K pcs	22 Kgs
9	10x12mm	500 pcs	3.5 K pcs	14 K pcs	24 Kgs
10	10x16mm	500 pcs	2.5 K pcs	10 K pcs	22 Kgs
11	10x21mm	500 pcs	2 K pcs	8 K pcs	24 Kgs
12	13x21mm	200 pcs	1.4 K pcs	5.6 K pcs	24 Kgs
13	13x26mm	200 pcs	1.2 K pcs	4.8 K pcs	24 Kgs
14	16x26mm	X	180/200 pcs	1.2/1.44 Kpcs	10/12 Kgs
15	16x31mm	X	180/200 pcs	1.08/1.2 Kpcs	10/12 Kgs
16	16x36mm	X	180/200 pcs	1.08/1.2 Kpcs	12.6/14 Kgs
17	18x36mm	X	160/200 pcs	0.96/1.2 Kpcs	12.8/16 Kgs
18	22x40mm	X	50 pcs	300 pcs	6.5 Kgs
19	25x40mm	X	50 pcs	300 pcs	6.5 Kgs

* weight is for reference only, not accurate. Please reconfirm weight details with your sales.