

TS12-R1

FEATURES

- Radial type, Snap-in type, Screw Type terminals
- High energy and high power
- Low ESR
- Pb-free and RoHS compliant



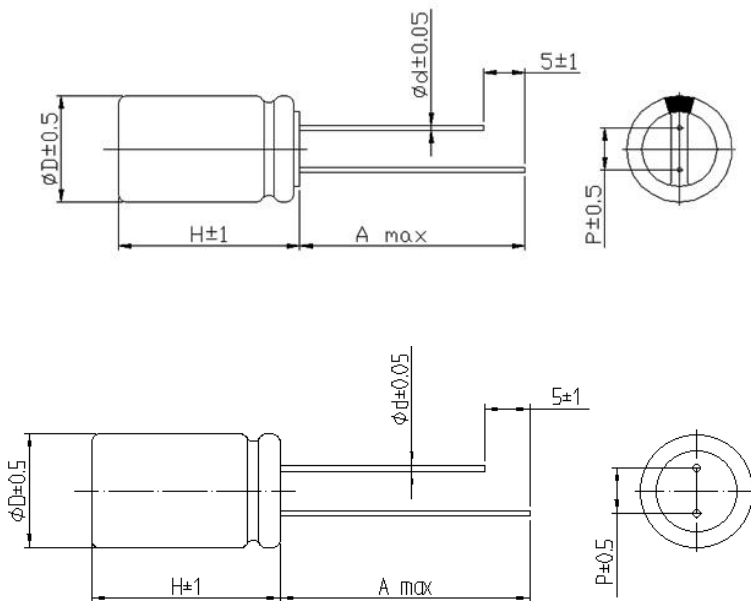
APPLICATIONS

- RAM, Detonator, car recorder, smart meter, vacuum switch, digital camera, motor drive, clock circuit, UPS, toy, program-controlled switch, etc.

SPECIFICATIONS		
Series name	TS12-R1 Series High power type	
Type name	TS12-R1 2R7	TS12-R1 3R0
Rated voltage V_R	2.7V	3.0V
Surge voltage	2.85V	3.15V
Capacity range	0.1F~3000F	1F~500F
Operating temperature range	-40~ +70°C	-40~ +65°C
Product life	Normal temperature cycle life : 25°C, 1 million cycles between V_R and $1/2V_R$, Capacity attenuation $\leq 30\%$, ESR change ≤ 4 times.	
	High temperature endurance life : Maximum temperature retention V_R , 1000 hours. Capacity attenuation $\leq 30\%$, ESR change ≤ 4 times.	

DIMENSIONS (mm)

0.1-120F

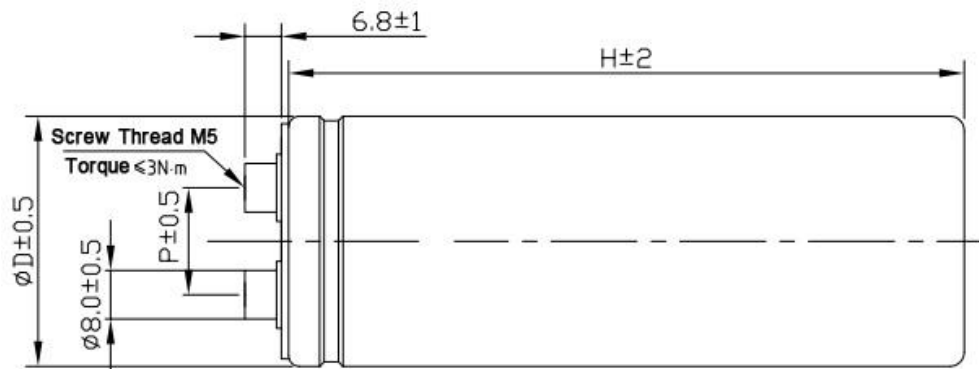


Note: Specification are subject to change without notice. For more detail and update, please visit our website.

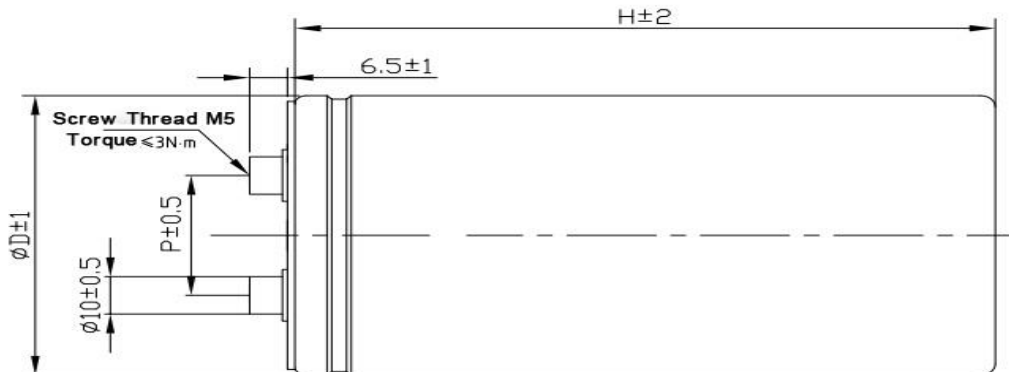
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DIMENSIONS (mm)

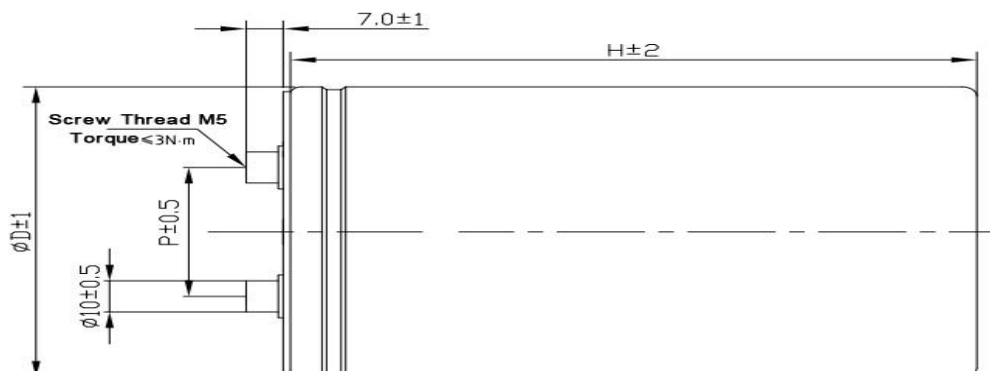
650F~800F bolt series product size specifications



1000F~2400F bolt series product size specifications



3000F bolt series product size specifications



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STANDARD RATINGS

Capacity (F)	ESR mΩ		Product size (mm)		
	DC	AC 1kHz	Diameter	Height	Pin distance
Rated voltage: 2.7V					
0.1	675	450	5	12	2
0.1	1400	700	5	12	2
0.1	1400	700	5	10	2
0.15	500	250	5	10	2
0.15	600	400	5	12	2
0.2	1200	600	5	10	2
0.2	400	200	5	12	2
0.22	750	500	5	12	2
0.25	750	500	5	12	2
0.25	750	500	6.3	12	2.5
0.25	4000	200	5	12	2
0.35	500	250	5	12	2
0.35	600	400	5	12	2
0.5	700	350	6.3	10	2.5
0.5	700	350	6.3	12.5	2.5
0.5	750	500	5	12	2
0.5	750	500	6.3	12	2.5
0.7	600	300	8	13	3.5
0.7	600	400	8	13	3.5
0.7	2600	1300	4	18	1.6
1	300	200	8	19	3.5
1	450	300	8	13	3.5
1	450	300	6.3	12	2.5
1	600	300	8	13.3	3.5
1	1100	550	6.3	10	2.5
1	1300	650	6.3	12.5	2.5
1.5	500	250	8	16	3.5
1.5	600	300	10	13	5
1.5	700	350	8	13	3.5
1.5	700	350	6.3	14	2.5
2	210	140	8	13	3.5
2	210	140	8	19	3.5
2	210	140	10	20	5
2	240	120	10	20	5
2	260	130	8	20.2	3.5
2	480	240	6.3	22	2.5
2	400	200	8	16	3.5
2	500	250	6.3	17	2.5
2.2	240	120	10	20	5
3	150	100	8	20.2	3.5
3	180	120	8	16	3.5
3	500	250	6.3	22	2.5

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STANDARD RATINGS

Capacity (F)	ESR (mΩ)		Product size (mm)		
	DC	AC 1kHz	Diameter	Height	Pin distance
Rated voltage: 2.7V					
3.3	120	80	10	20	5
3.3	140	70	10	20	5
3.3	150	100	10	16	5
3.3	180	120	8	19	3.5
3.3	240	120	8	20	3.5
3.3	500	250	6.3	22	2.5
4	120	80	10	20	5
4	140	70	10	20	5
4	200	100	12.5	21	5
4	200	100	8	20	3.5
4.7	105	70	12.5	21	5
4.7	120	60	12.5	21	5
5	105	70	12.5	21	5
5	180	90	10	20	5
5	180	90	8	24	3.5
5	180	90	8	20	3.5
6	105	70	12.5	21	5
6	120	60	10	25	5
6	150	75	10	20.2	5.5
6	300	150	8	24	3.5
7	105	70	10	25	5
7	160	80	10	20	5
7	160	80	8	30	3.5
8	75	50	12.5	21	5
8	100	50	12.5	21	5.5
10	75	50	12.5	26.2	5.5
10	75	50	10	30	5
10	90	60	12.5	21	5
10	80	40	12.5	25	5
10	80	40	10	34	5
10	100	50	10	25.2	5.5
10	110	55	10	30.5	5.5
10	110	55	12.5	21	5
12	75	50	12.5	26	5
12	80	40	12.5	34	5
12	80	40	12.5	21	5
15	45	30	16	26	7.5
15	60	30	16	26.3	7.5
15	70	35	12.5	25	5
15	76	38	12.5	30.7	5.5
15	80	40	10	30	5
16	76	38	16	20	7.5
18	60	30	12.5	25	5

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STANDARD RATINGS

Capacity (F)	ESR (mΩ)		Product size (mm)		
	DC	AC 1kHz	Diameter	Height	Pin distance
Rated voltage: 2.7V					
20	37.5	25	16	26	7.5
20	46	23	16	34	7.5
20	50	25	16	26.5	7.5
20	50	25	12.5	25	5
20	50	25	12.5	34	5
22	37.5	25	16	26	7.5
25	37.5	25	16	26	7.5
25	40	20	16	34	7.5
25	50	25	16	26	7.5
25	60	30	12.5	34	5
30	37.5	25	16	34	7.5
30	40	20	16	34	7.5
30	44	22	12.5	34	5
30	44	22	18	26	7.5
30	44	22	16	32	7.5
35	40	20	16	26	7.5
40	30	20	18	41	8
40	40	20	16	34	7.5
40	40	20	18	34	7.5
40	40	20	18	41.3	7.5
50	30	20	18	41	8
50	40	20	18	41.3	7.5
50	40	20	18	34	7.5
60	16	14	22.4	45.5	10
60	22.5	15	18	41	8
60	40	20	18	41	7.5
70	22.5	15	18	52	8
90	30	15	22	46	10
100	14	12	22.4	45.5	10
100	30	15	22	42	10
100	30	15	22	46	10
100	30	15	25.4	40	10
100	30	20	18	45	8
120	14	12	22.4	45.5	10
120	30	15	25.4	54	10
120	30	15	22	46	10
120	30	15	25.4	40	10
150	14	12	25.2	52.5	10
150	30	15	25.4	54	10

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Capacity (F)	ESR (mΩ)		Product size (mm)		
	DC	AC 1kHz	Diameter	Height	Pin distance
Rated voltage: 2.7V					
150	30	15	25.4	40	10
180	20	10	25.4	54	10
180	20	10	30	40	10
200	11	10	35.6	61.5	10
200	20	10	35	61	10
200	20	10	25.4	54	10
200	20	10	30	50	10
220	11	10	30	50	10
220	20	10	30	50	10
220	20	10	35	61	10
240	20	10	30	50	10
260	20	10	30	50	10
260	20	10	35	61	10
300	9	8	35.6	61.5	10
300	20	10	35	54	10
300	20	10	35	61	10
360	7	3.5	35	61	10
360	9	8	35.6	61.5	10
400	9	8	35.6	61.5	10
400	20	10	35	61	10
470	8	6	35.6	61.5	10
470	10	5	35	61	10
500	20	10	35	61	10
550	20	10	35	70	10
600	20	10	35	70	10
650	10	5	35	96	12.7
700	10	5	35	96	12.7
800	10	5	35	96	12.7
1000	10	5	51	71	21.8
1200	6	3	51	108	21.8
1500	6	3	51	108	21.8
2000	4	2	51	133	21.8
2400	4	2	51	133	21.8
3000	4	2	64	133	28.2
350	3	1.6	35	62	/
3000	0.29	0.25	60	140	/

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STANDARD RATINGS

Capacity (F)	ESR (mΩ)		Product size (mm)		
	DC	AC 1kHz	Diameter	Height	Pin distance
Rated voltage: 3.0V					
1	450	300	8	13	3.5
2	210	140	8	13	3.5
2	210	140	8	19	3.5
3	150	100	8	19	3.5
3.3	120	80	8	19	3.5
3.3	120	80	10	20	5
4.7	105	70	10	20	5
5	105	70	10	20	5
10	55	35	10	25	5
15	45	30	12.5	26	5
25	30	20	18	42	7.5
50	22.5	15	18	42	7.5
60	22.5	15	18	42	7.5
100	14	12	22.5	46	10
120	14	12	22.5	46	10
150	12	10	25.2	52.5	10
360	9	8	35.6	61.5	10
400	9	8	35.6	61.5	10
470	8	6	35.6	61.5	10