

# GPST Series

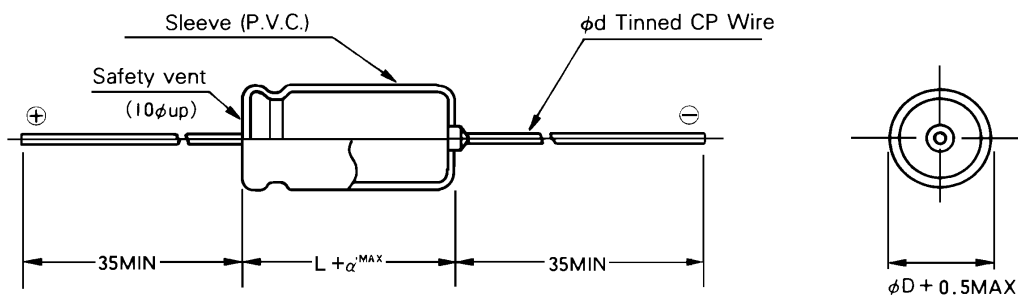


## Features

- \* Wide temperature range.
- \* 2000 Hours lifetime at 85 °C
- \* Solvent proof

Item	Performance Characteristics					
Operating Temperature Range	-40 to +85°C			-25 to +85°C		
Working Voltage Range	6.3 to 400 V			450 V		
Nominal Capacitance Range	0.47 to 22000 uF					
Capacitance Tolerance	+/- 20 % ( 120 Hz, 20°C)					
Leakage Current (+20°C)	6.3V to 100 V			160V to 450 V		
	I=0.03CV or 4uA whichever is greater after 1 min. application of rated voltage.			CV<=1000: I=0.1CV +40 uA or less after 1 min. application of rated voltage.		
Dissipation Factor % (120 Hz, +20°C)	I=0.01CV or 3uA whichever is greater after 2 mins. application of rated voltage.			CV>1000: I=0.04CV +100 uA or less after 1 min. application of rated voltage.		
	Less than the value below					
Temperature Characteristics	WVDC	6.3	10	16	25	35
	tan δ (Max)	0.24	0.2	0.16	0.14	0.12
	WVDC	50	63	100	160-350	400-450
	tan δ (Max)	0.1	0.09	0.08	0.2	0.25
Load Life	For capacitances of more than 1000uF, add 0.02 for every increase of 1000uf (120Hz, 20°C)					
	Impedence Ratio at 120 Hz					
	WVDC	6.3	10	16	25	35
	Z(-25°C) / Z(+20°C)	4	3	2	2	2
	Z(-40°C) / Z(+20°C)	10	8	6	4	3
	WVDC	50-100	160-200	250	315-400	450
Shelf Life	Z(-25°C) / Z(+20°C)	2	3	3	3	5
	Z(-40°C) / Z(+20°C)	3	6	6	6	
Marking	Test conditions					
	Duration time: 2000 Hrs			+ 85°C		
Applicable Standards	Ambient temperature: +85°C			Rated working voltage		
	Applied voltage: None			Maximum rated ripple current.		
Physical Dimensions and Mounting Details	Ripple Current: Maximum rated ripple current.			After testing--Measure at 20°C		
	Capacitance change: <= +/- 20% of initial measured value			Dissipation factor: <= 200% of initial specified value		
Physical Dimensions and Mounting Details	Leakage current: <= The initial specified value			Test Conditions		
	Duration time: 1000 Hrs			+85°C		
Physical Dimensions and Mounting Details	Ambient temperature: +85°C			None		
	Applied voltage: None			After testing--Measure at 20°C		
Physical Dimensions and Mounting Details	Same limits as for load life.			Pretreatment before testing: According to JIS C-5102 4-3		
	White print on black sleeve					
Characteristic W of JIS C-5141						

## Physical Dimensions and Mounting Details



Ø D	5-12.5	16-18	22-25
Ø d	0.6	0.8	0.8
α <= 100 WV	1.0	1.0	2.0
α >= 160 WV	2.0	2.0	-

# GPST Series



I<sub>r</sub> (mA) specified at 85°C and 120 KHz

**GPST Standard Products Table 6.3 to 35 Volt**

uF	6.3V		10 V		16 V		25 V		35 V	
	Dia x L	I <sub>r</sub> (mA)	Dia x L	I <sub>r</sub> (mA)	Dia x L	I <sub>r</sub> (mA)	Dia x L	I <sub>r</sub> (mA)	Dia x L	I <sub>r</sub> (mA)
10							5 x 12.5	40	5 x 12.5	45
22					5 x 12.5	60	5 x 12.5	65	5 x 12.5	70
33			5 x 12.5	70	5 x 12.5	75	5 x 12.5	80	6.3 x 12.5	95
47			5 x 12.5	80	5 x 12.5	90	6.3 x 12.5	105	6.3 x 16	125
100	5 x 12.5	110	6.3 x 12.5	130	6.3 x 12.5	145	6.3 x 16	170	8 x 16	200
220	6.3 x 16	200	6.3 x 16	220	8 x 16	260	8 x 16	280	8 x 20	340
330	6.3 x 16	250	8 x 16	300	8 x 16	320	8 x 20	380	10 x 21	460
470	8 x 16	330	8 x 16	350	8 x 20	430	10 x 26	560	10 x 26	610
1000	10 x 21	600	10 x 21	640	10 x 26	770	12.5 x 26	900	12.5 x 31	1050
2200	12.5 x 26	1020	12.5 x 26	1090	12.5 x 31	1280	16 x 31	1470	16 x 31	1570
3300	12.5 x 26	1200	12.5 x 31	1380	16 x 31	1610	16 x 41	1910	16 x 41	2020
4700	16 x 31	1630	16 x 31	1720	16 x 41	2060	18 x 41	2170	22 x 41	2460
6800	16 x 31	1830	16 x 41	2160	18 x 41	2290	22 x 41	2560	22 x 51	2700
10000	16 x 41	2290	18 x 41	2390	22 x 41	2680	22 x 51	2800	25 x 61	3400
15000	22 x 41	2630	22 x 41	2750	22 x 51	2890	25 x 61	3480		
22000	22 x 51	2830	22 x 51	2940	25 x 61	3570				

**GPST Standard Products Table 50 to 200 Volt**

uF	50V		63 V		100 V		160 V		200 V	
	Dia x L	I <sub>r</sub> (mA)	Dia x L	I <sub>r</sub> (mA)	Dia x L	I <sub>r</sub> (mA)	Dia x L	I <sub>r</sub> (mA)	Dia x L	I <sub>r</sub> (mA)
0.47	5 x 12.5	5			5 x 12.5	10				
1	5 x 12.5	10			5 x 12.5	21	6.3 x 12.5	13	6.3 x 12.5	13
2.2	5 x 12.5	23			5 x 12.5	27	6.3 x 16	23	6.3 x 16	23
3.3	5 x 12.5	30			5 x 12.5	35	8 x 16	33	8 x 16	33
4.7	5 x 12.5	36	5 x 12.5	38	5 x 12.5	40	8 x 16	39	8 x 16	45
10	5 x 12.5	50	5 x 12.5	55	6.3 x 12.5	65	8 x 20	60	10 x 21	70
15			5 x 12.5	55						
22	6.3 x 12.5	85	6.3 x 12.5	90	8 x 16	115	10 x 26	120	12.5 x 26	140
33	6.3 x 16	115	6.3 x 16	125	8 x 16	145	12.5 x 26	170	12.5 x 26	190
47	6.3 x 16	140	8 x 16	160	8 x 20	190	12.5 x 31	220	12.5 x 31	250
100	8 x 16	220	8 x 20	260	10 x 26	340	16 x 41	420	16 x 41	420
220	10 x 21	410	10 x 26	480	12.5 x 26	560				
330	10 x 26	560	12.5 x 26	640	12.5 x 31	740				
470	12.5 x 26	730	12.5 x 31	830	16 x 31	960				
1000	16 x 31	1250	16 x 31	1320	22 x 41	1700				
2200	18 x 41	1920	22 x 41	2150	25 x 51	2590				
3300	22 x 41	2340	22 x 51	2450						
4700	22 x 51	2630	25 x 61	3180						
6800	25 x 61	3310								

Ir (mA) specified at 85°C and 120 KHz

**GPST Standard Products Table 250 to 450 Volt**

uF	250V		315 V		350 V		400 V		450 V	
	Dia x L	Ir(mA)	Dia x L	Ir(mA)	Dia x L	Ir(mA)	Dia x L	Ir(mA)	Dia x L	Ir(mA)
1	6.3 x 16	15	6.3 x 16	15	6.3 x 16	15	8 x 16	16	8 x 16	16
2.2	8 x 16	27	8 x 16	27	8 x 16	27	8 x 20	27	10 x 21	31
3.3	8 x 16	33	8 x 20	37	8 x 20	37	10 x 21	38	10 x 21	38
4.7	8 x 20	45	8 x 20	45	10 x 21	50	10 x 21	45	10 x 26	50
10	10 x 21	70	10 x 26	80	12.5 x 26	90	12.5 x 26	85	12.5 x 26	85
22	12.5 x 26	140	12.5 x 31	150	12.5 x 31	150	16 x 31	150	16 x 31	150
33	12.5 x 31	190	16 x 31	210	16 x 31	210	16 x 41	220	18 x 41	230
47	16 x 31	250	16 x 31	250	16 x 41	290	18 x 41	280		
100	16 x 41	420								

## Ripple Current Multipliers

Frequency

uF	WVDC	Freq.				
		50Hz	120Hz	300Hz	1KHz	>= 10 KHz
<=47	6.3 to 100	0.75	1	1.35	1.57	2.00
100 ~ 470		0.80	1	1.23	1.34	1.50
100 ~ 22000		0.85	1	1.10	1.13	1.15
1 ~ 100	160 to 450	0.80	1	1.25	1.40	1.60

Temperature

Temp. °C	<=70	85
Multiplier	1.27	1