CONDUCTIVE POLYMER ALUMINUM SOLID CAPACITORS

UGS Series

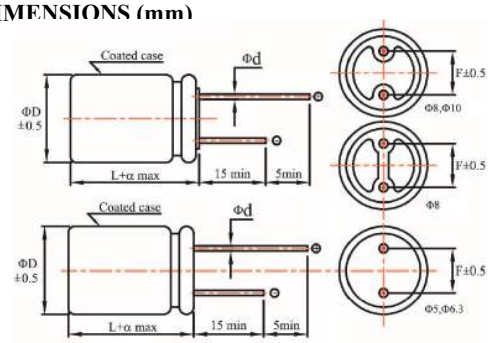
- **2021 Change series code GS → UGS**
- **Low ESR at a high frequency range**
- **High ripple current capability**
- **Large capacitance, size 8x16~10x20**
- **2,000 hours at 105°C**

◆ SPECIFICATIONS

Item	Performance Characteristics
Category Temperature Range	-55 ~ +105°C
Working Voltage Range	10 ~ 35Vdc
Surge Voltage	Rated Voltage x1.15
Capacitance Tolerance	M: ±20% (at 25°C and 120Hz)
ESR	See the standard ratings table (at 25°C, 100~300KHz)
Dissipation Factor (Tanδ)	See the standard ratings table (at 25°C, 120Hz)
Leakage Current ※1	See the standard ratings table (Impress the rated voltage for 2 minutes)
Low Temperature Characteristics Impedance Ratio	Z(-25°C)/Z(+25°C) ≤1.15 at 100KHz Z(-55°C)/Z(+25°C) ≤1.25 at 100KHz
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 2,000 hours at 105°C (Part code "F5" for 5000 hours) Capacitance change: ≦ ±20% of the initial value ESR: ≦ 150% of the specified value Dissipation factor(tanδ): ≦ 150% of the specified value Leakage current: ≦ specified value
Damp Heat (Steady State)	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 1,000 hours at 60°C 90 to 95% RH Capacitance change: ≦ ±20% of the initial value ESR: ≦ 150% of the specified value Dissipation factor(tanδ): ≦ 150% of the specified value Leakage current: ≦ specified value

※1 In case of some problems for measured values, measure after applying rated voltage for 120 minutes at105°C
※2 ESR should be measured at both of the terminal ends closest to the capacitor body

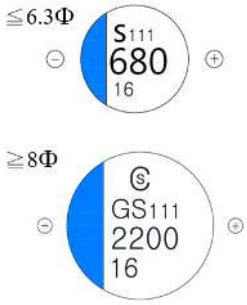
◆DIMENSIONS (mm)



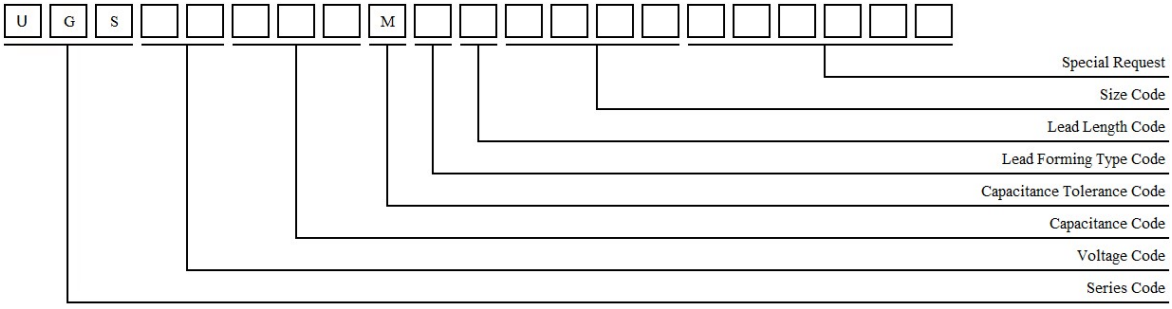
◆Lead

ΦD	6.3	8	10
Φd	0.6	0.6	0.6
L	16	16~22	16~22
α	1.5	1.5	1.5
F	2.5	3.5	5.0

◆Marking



◆ PART NUMBER SYSTEM



UGS Series

◆ **Standard Ratings**

Rated Voltage (Vdc)	Rated Capacitance (μF)	Case Size ΦD×L (mm)	ESR 100~300KHz (mΩ max)	Rated Ripple Current 105°C,100KHz (mArms max)	Tan δ max	Leakage Current (μA max)	Part Number
10(1A)	1500	8×20	19	4500	0.12	3000	UGS1A152MNN0820U
16(1C)	470	8×16	10	5300	0.12	1504	UGS1C471MNN0816U
	680	6.3×16	16	4000	0.12	1088	UGS1C681MNN6316S
	820	8×16	8	7000	0.12	2624	UGS1C821MNN0816F5ERU
	1000	8×16	10	6100	0.12	3200	UGS1C102MNN0816RU
	1000	8×20	8	6100	0.12	1600	UGS1C102MNN0820U
	1200	8×20	8	6100	0.12	1920	UGS1C122MNN0820U
	1200	8×20	8	7500	0.12	1920	UGS1C122MNN0820RU
	1500	10×16	8	6100	0.12	2400	UGS1C152MNN1016U
	1500	10×16	8	6100	0.12	2400	UGS1C152MNN1016F5U
	1800	10×16	8	6100	0.12	2880	UGS1C182MNN1016SU
	1800	10×20	8	6100	0.12	2880	UGS1C182MNN1020U
	2200	10×20	8	6100	0.12	3520	UGS1C222MNN1020U
	2200	10×20	8	6100	0.12	3520	UGS1C222MNN1020F5U
	2700	10×20	10	5700	0.12	4320	UGS1C272MNN1020U
	2700	10×20	10	8100	0.12	4320	UGS1C272MNN1020F5RU
	2700	10×22	10	5700	0.12	4320	UGS1C272MNN1022U
	2700	10×22	10	5700	0.12	4320	UGS1C272MNN1022F5U
	3000	10×22	10	7600	0.12	4800	UGS1C302MNN1022RU
20(1D)	680	8×16	16	4650	0.12	1360	UGS1D681RNN0816TU
	820	8×16	16	4650	0.12	3280	UGS1D821MNN0816U
	1000	10×16	16	4650	0.12	4000	UGS1D102MNN1016U
22(1P)	680	8×16	16	4650	0.12	1496	UGS1P681MNN0816U
25(1E)	470	8×16	16	4650	0.12	2350	UGS1E471MNN0816U
	470	8×20	16	4650	0.12	2350	UGS1E471MNN0820U
	680	8×16	16	4650	0.12	3400	UGS1E681MNN0816U
	680	8×16	16	4650	0.12	3400	UGS1E681MNN0816UX
	820	8×20	16	5000	0.12	4100	UGS1E821MNN0820U
	820	8×21	16	5000	0.12	4100	UGS1E821MNN0821SU
	820	10×16	20	4000	0.12	4100	UGS1E821MNN1016F5U
	1000	10×16	16	5000	0.1	5000	UGS1E102MNN1016F5RU
35(1V)	330	10×16	28	2600	0.12	2310	UGS1V331MNN1016U
	680	10×20	28	2600	0.12	4760	UGS1V681MNN1020U

PART NUMBER SYSTEM

♦ RADIAL LEAD TYPE

Series	Rated Voltage	Capacitance	Tolerance	Lead Forming Type	Lead Length	Case Dimension	Special Request
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
□ □ □	□ □	□ □ □	□	□	□	□ □ □ □	□ □ □ □ □ □

(1) Series

Series											
	DIP	UPS	UPR	UUL	UPE	URP	URH	UGP	UGV	UGS	UPC
	SMD	VSG	VSP	VSU	VSE						

(2) Rated Voltage

Code	0E	0J	6K	7H	1A	1B	AG	1C	1D	1P	1E	1F	1V	1H	1J	2A
WV	2.5	6.3	6.8	7.5	10	12	14	16	20	22	25	30	35	50	63	100

(3) Capacitance

Code	6R8	100	180	560	101	181	561	102	182
μF	6.8	10	18	56	100	180	560	1000	1800

(4) Capacitance Tolerance

Code	J	Q	R	K	V	M	H
%	± 5	+30 / -10	+20 / -0	± 10	+20 / -10	± 20	+20 / -5

(5) Lead Type

Code	C	P
Description	Cutting	Taping
Drawing	Fig 1	Fig 2

(6) Lead Length (Cut / Formed lead)

Code	3	4	U	7	D	X	R	B	E	G	2	M	T	N
Length	3.5	4.5	5.5	7	4	2.3	2.5	2.8	3.1	3.3	2.5	3.5	3.8	+20mm min
Tolerance	±0.5					±0.2					±0.3			-15mm min

Taping Code

Code	Z	2	3	7	5	S
Lead Pitch:+0.8/-0.2	2.0	2.5	3.5	3.5	5.0	5.0

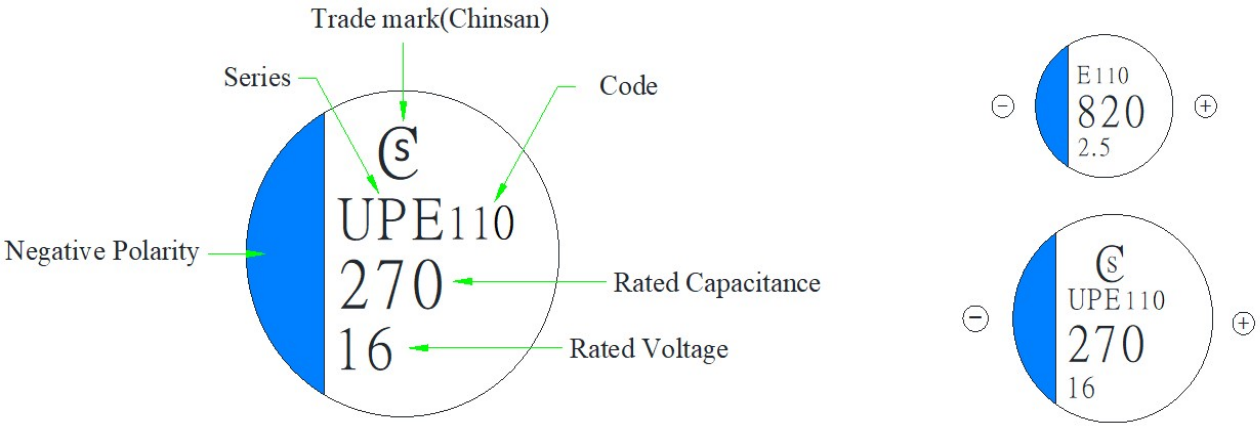
(7) Case Dimension

DIP Code	0508	6305	6308	6316	0807	0808	0811	0816	0820	1012	1016	1020
Size	5×8	6.3×5	6.3×8	6.3×16	8×7	8×8	8×11	8×16	8×20	10×12	10×16	10×20
SMD Code	5057	6343	6357	6377	6309	0867	0897	08C7	1077	10C4		
Size	5×5.7	6.3×4.3	6.3×5.7	6.3×7.7	6.3×9	8×6.7	8×9.7	8×12.7	10×7.7	10×12.4		

(8) Special Request

Code	R	F5	L	T
Description	High Rated ripple current	Endurance 5000 hrous	Low Leakage Current	Terminal strength
Code	U	E	X	S
Description	Convex Rubber	Low ESR	Pitch 2.5mm	Limit high

♦ MARKING AND DATE CODE



Trade Mark "CS"	Chinsan Solid Capacitor, Show on Dimension ≧8 Φ

Code (Date Code)

(1)	(2)	(3)
1	1	0

(1)DAY

Code	1	2	3	4	5
Week	The first week	The second week	The third week	The fourth week	The fifth week

(2)Month

Code	1	2	3	4	5	6
Month	Jan	Feb	Mar	Apr	May	Jun
Code	7	8	9	X	Y	Z
Month	July	Aug	Sep	Oct	Nov	Dec

(3)Year

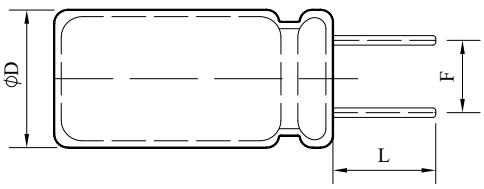
Code	9	0	1	2	3	4
Year	2019	2020	2021	2022	2023	2024

Series (Print Code)

Series	UPS	UPR	UUL	UPE	URP	URH	UGP	UGV	UGS	UPC	VSG	VSP	VSU	VSE
Φ 5~ Φ 6.3	--	R	L	E	--	H	P	V	S	C	G	P	U	E
Φ 8~ Φ 10	UPS	--	UL	UPE	RP	RH	GP	GV	GS	UPC	SG	SP	SU	SE

♦ LEAD FORMING TYPE

Type	Part Number	Dimensions (Unit: mm)													
		ΦD	F	ι	L (Part number for lead length and pitch for taping)										
					3	4	U	7	D	X	R	B	E	G	2	M	T
					3.5	4.5	5.5	7	4	2.3	2.5	2.8	3.1	3.3	2.5	3.5	3.8
					±0.5					±0.2					±0.3		
Cut	C	5	2	----													
		6.3	2.5	----													
		8	3.5	----													
		10	5	----													



♦ TAPING

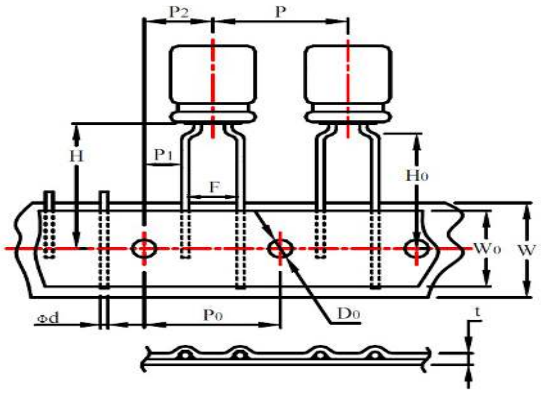


Figure 1	Symbol	Tolerance	Φ 5		Φ 6.3		Φ 8	
			PS	P5	PS	P5	PS	**P5**
	Φd	±0.05	0.45		0.45/0.6		0.6	
	P	±0.1	12.7		12.7		12.7	
	P0	±0.2	12.7		12.7		12.7	
	P1	±0.5	3.85		3.85		3.85	
	P2	±1.0	6.35		6.35		6.35	
	F	0.8 / -0.2	5		5		5	
	H	±0.5	17.5	18.5	17.5	18.5	17.5	18.5
	H0	±0.5	16		16		16	
	W	±0.5	18		18		18	
	W0	Minimum	12.5		12.5		12.5	
	D0	±0.2	4		4		4	
	t	±0.2	0.7		0.7		0.7	

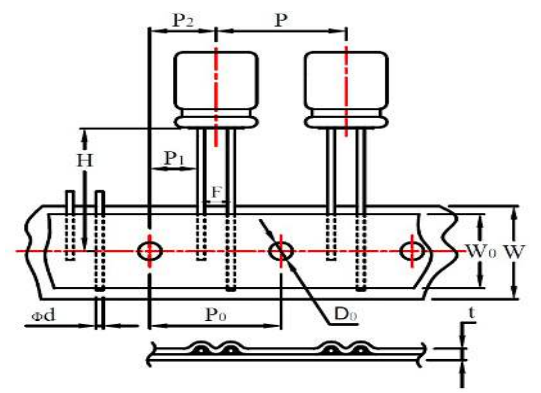


Figure 2	Symbol	Tolerance	Φ 6.3	Φ 8			Φ 10		
			P2	**P3**	**H3**	**P7**	**P5**	**H5**	**J5**
	Φd	±0.05	0.45/0.6	0.6			0.6		
	P	±0.1	12.7	12.7			12.7		
	P0	±0.2	12.7	12.7			12.7		
	P1	±0.5	5.1	4.6			3.85		
	P2	±1.0	6.35	6.35			6.35		
	F	+0.8 / -0.2	2.5	3.5			5		
	H	±0.5	118.5	18.5	20	17.5	18.5	20	21
	H0	±0.5	-	-			-		
	W	±0.5	18	18			18		
	W0	Minimum	12.5	12.5			12.5		
	D0	±0.2	4	4			4		
	t	±0.2	0.7	0.7			0.7		

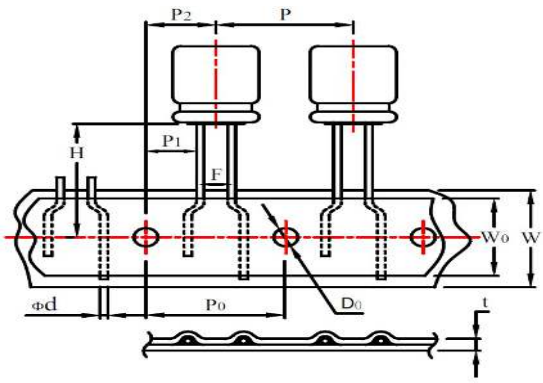


Figure 3	Symbol	Tolerance	Φ 5
			PZ
	Φd	±0.05	0.45
	P	±0.1	12.7
	P0	±0.2	12.7
	P1	±0.5	5.35
	P2	±1.0	6.35
	F	+0.8 / -0.2	2.0
	H	±0.5	18.5
	H0	±0.5	-
	W	±0.5	18
	W0	Minimum	12.5
	D0	±0.2	4
	t	±0.2	0.7

Packing quantity

Size		Inner Box	Carton Box
ØD	**L**	**Q'ty (Pcs.)**	**Q'ty (Pcs.)**
5	8~12	2500	12500
5.5	8~12	2200	11000
6.3	5~12	2000	10000
	16	2000	10000
8	6~12	1000	5000
	16~22	1200	6000
10	7~12	800	4000
	16~22	800	4000