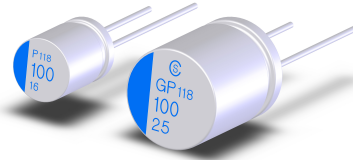




UGP Series

- 2021 Change series code GP → UGP
- Low ESR at a high frequency range
- High ripple current capability
- 2,000 hours at 105°C



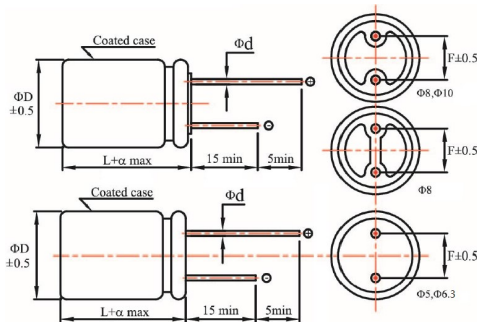
SPECIFICATIONS

Item	Performance Characteristics	
Category Temperature Range	-55 ~ +105°C	
Working Voltage Range	6.3 ~ 25Vdc	
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	
	Capacitance change	≤ ±20% of the initial value
	ESR	≤ 150% of the specified value
	Dissipation factor(tanδ)	≤ 150% of the 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 at 105°C

※2 ESR should be measured at both of the terminal ends closest to the capacitor body

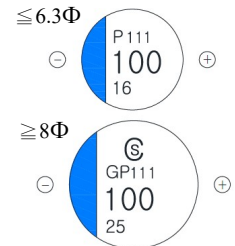
DIMENSIONS (mm)



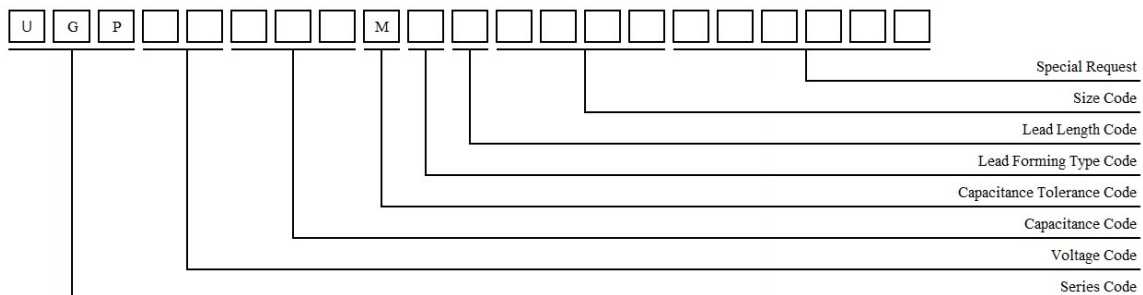
Lead

ΦD	6.3		8			10		
Φd	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
L	8	11	7	8	11	7	10	12
α	1	1.5	1	1	1.5	1.5	1.5	1.5
F	2.5	2.5	3.5	3.5	3.5	5.0	5.0	5.0

Marking



PART NUMBER SYSTEM





UGP 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
6.3(0J)	1500	10×10	10	5560	0.12	1890	UGP0J152MNN1010U
10(1A)	470	8×7	23	3100	0.12	940	UGP1A471MNN0807U
	470	8×8	20	3400	0.12	940	UGP1A471MNN0808U
	470	10×7	13	4500	0.12	940	UGP1A471MNN1007RU
	680	8×11	20	3900	0.12	1360	UGP1A681MNN0811U
	1000	10×12	19	6100	0.12	2000	UGP1A102MNN1012U
	1000	10×12	19	6100	0.12	2000	UGP1A102MNN1012RU
	1500	10×12	19	4500	0.12	3000	UGP1A152MNN1012U
16(1C)	100	6.3×8	24	2490	0.12	320	UGP1C101MNN6308
	180	8×8	19	3400	0.12	576	UGP1C181MNN0808U
	270	6.3×11	20	3100	0.12	864	UGP1C271MNN6311
	330	10×7	25	3300	0.12	1320	UGP1C331MNN1007U
	330	10×12	19	4500	0.12	1056	UGP1C331MNN1012U
	470	10×12	19	4500	0.12	1504	UGP1C471MNN1012U
20(1D)	470	8×11	14	4900	0.12	1880	UGP1D471MNN0811U
25(1E)	47	8×7	45	1890	0.12	294	UGP1E470MNN0807U
	47	8×11	30	2500	0.12	568	UGP1E470MNN0811U
	68	8×11	24	3320	0.12	425	UGP1E680MNN0811U
	100	10×12	20	4320	0.12	625	UGP1E101MNN1012U



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)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

(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	6311	0807	0808	0811	0816	0820	1012	1016	1020
Size	5×8	6.3×5	6.3×8	6.3×11	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	F	L	D
Description	High Rated ripple current	Endurance	Low Leakage Current	Low Dissipation Factor
Code	U	E	---	---
Description	Convex Rubber	Low ESR	---	---

CONDUCTIVE POLYMER ALUMINUM SOLID CAPACITORS



◆ MARKING AND DATE CODE

Trade mark(Chinsan)

Series: UPE110
Rated Capacitance: 270
Rated Voltage: 16

Trade Mark "CS"	Chinsan Solid Capacitor, Show on Dimension $\geq 8 \Phi$																																																						
Code (Date Code)	<p>(1)DAY</p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Code</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr> <tr><td>Week</td><td>The first week</td><td>The second week</td><td>The third week</td><td>The fourth week</td><td>The fifth week</td></tr> </table> <p>(2)Month</p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Code</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th></tr> <tr><td>Month</td><td>Jan</td><td>Feb</td><td>Mar</td><td>Apr</td><td>May</td><td>Jun</td></tr> <tr><th>Code</th><th>7</th><th>8</th><th>9</th><th>X</th><th>Y</th><th>Z</th></tr> <tr><td>Month</td><td>July</td><td>Aug</td><td>Sep</td><td>Oct</td><td>Nov</td><td>Dec</td></tr> </table> <p>(3)Year</p> <table border="1" style="width: 100%; text-align: center;"> <tr><th>Code</th><th>9</th><th>0</th><th>1</th><th>2</th><th>3</th><th>4</th></tr> <tr><td>Year</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td></tr> </table>	Code	1	2	3	4	5	Week	The first week	The second week	The third week	The fourth week	The fifth week	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	Code	9	0	1	2	3	4	Year	2019	2020	2021	2022	2023	2024
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Series (Print Code)	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Series</th><th>UPS</th><th>UPR</th><th>UUL</th><th>UPE</th><th>URP</th><th>URH</th><th>UGP</th><th>UGV</th><th>UGS</th><th>UPC</th><th>VSG</th><th>VSP</th><th>VSU</th><th>VSE</th></tr> </thead> <tbody> <tr> <td>$\Phi 5 \sim \Phi 6.3$</td><td>--</td><td>R</td><td>L</td><td>E</td><td>--</td><td>H</td><td>P</td><td>V</td><td>--</td><td>C</td><td>G</td><td>P</td><td>U</td><td>E</td></tr> <tr> <td>$\Phi 8 \sim \Phi 10$</td><td>UPS</td><td>--</td><td>UL</td><td>UPE</td><td>RP</td><td>RH</td><td>GP</td><td>GV</td><td>GS</td><td>UPC</td><td>SG</td><td>SP</td><td>SU</td><td>SE</td></tr> </tbody> </table>	Series	UPS	UPR	UUL	UPE	URP	URH	UGP	UGV	UGS	UPC	VSG	VSP	VSU	VSE	$\Phi 5 \sim \Phi 6.3$	--	R	L	E	--	H	P	V	--	C	G	P	U	E	$\Phi 8 \sim \Phi 10$	UPS	--	UL	UPE	RP	RH	GP	GV	GS	UPC	SG	SP	SU	SE									
Series	UPS	UPR	UUL	UPE	URP	URH	UGP	UGV	UGS	UPC	VSG	VSP	VSU	VSE																																									
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$\Phi 8 \sim \Phi 10$	UPS	--	UL	UPE	RP	RH	GP	GV	GS	UPC	SG	SP	SU	SE																																									

◆ LEAD FORMING TYPE

Type	Part Number	Dimensions (Unit: mm)																	
		ΦD	F	t	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	----															

CONDUCTIVE POLYMER ALUMINUM SOLID CAPACITORS



◆ 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 (Pes.)	Q'ty (Pes.)
5	8~12	2500	12500
	5.5	8~12	2200
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