

**FLYiNG**

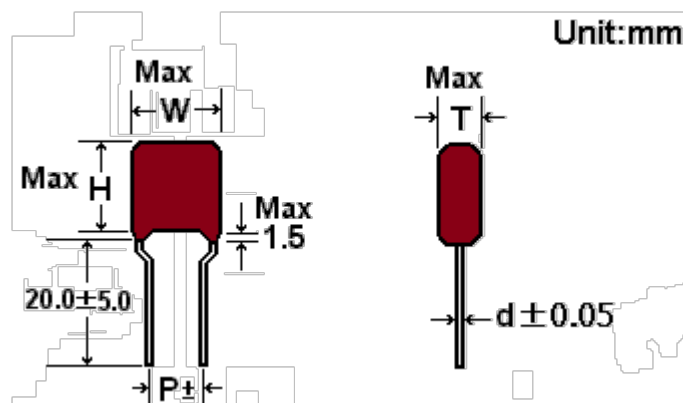
粉體塗裝電容器規格書

成品型號: MPR224J2ABN

版次: 0

日期: 2021/03/31

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Metallized Polypropylene Film Capacitor.**TYPE : MPR224J/100VDC**

TYPE	MPR	
DIMENSIONS	Unit	mm
CAPACITANCE	μF	0.22
Voltage	VDC	100
Max. Insulation Resistance	IR	Cap ≤ 0.33μF IR > 30,000MOHM Cap > 0.33μF IR > 10,000MOHM × μF

FLYiNG 汎翊國際有限公司
www.flying1688.com



1.Part Name: Metallized Polypropylene Film Capacitor.

2.Type: MPR (epoxy dipped)

3.Working Voltage: 100(2A) VDC

4.Capacitance Range: 0.22 μ F

5.Capacitance Range Tolerance: J ($\pm 5\%$)

6.Temperature Range: - 40 $^{\circ}$ C -- +105 $^{\circ}$ C

7.Flame retardant resin : PBT 94-V0

8.Characteristics

ARTICLE	APPLICATION ITEM	CHARACTERSTICS	TEST METHOD
1.	Dielectric Strength (Between Terminals)	No damage	R.V $\times 175\%$ VDC For 2 Sec 25 $^{\circ}$ C
	Test voltage between terminals and case (Utc)		1KV 1Khz applied for 60s at 25 $\pm 5^{\circ}$ C
2.	Insulation Resistance (Between Terminals)	Cap $\leq 0.33\mu$ F IR > 30,000MOHM Cap > 0.33 μ F IR > 10,000MOHM $\times \mu$ F	Measured at 100VDC after 1 minute. between terminals, at 25 $\pm 5^{\circ}$ C.
3.	Capacitance	Within the specification	Measured with frequency 1Khz and AC volatge less than 6V.
4.	Disspation factor	$\tan \delta < 0.1\%$	
5.	Tensile strenght of terminations	No damage	Loading force in dending the lead to 90 of the body. 0.6
6.	Vibration	No opening and short happened No damage in element junction and appearance.	10 – 55Hz 1.5 mm amplitude 3 direction 2H Per direction.
7.	Solderability	Good tinning, by eye measurement more than 3/4 of circumference is covered with new solder	Solder temp. 245 $^{\circ}$ C $\pm 5^{\circ}$ C dwell time 3 ± 0.5 Sec
8.	Cold	Capacitance change within + 3 -0% of 25 $^{\circ}$ C	At -40 $^{\circ}$ C no Voltage applied
9.	Heat	Capacitance change within + 0 -5% of 25 $^{\circ}$ C	At + 105 $^{\circ}$ C no Voltage applied
10.	Humidity life test	Appearance : No damage Dielectric strength : No damage IR : > 30% of initial value cap. change $\leq 5\%$ of initial value $\tan \delta < 0.1\%$	Temp. and humidity 40 $^{\circ}$ C 90 - 95% R.H. add W.V. for 500H then keep 16H under room temp.

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ARTICLE	APPLICATION ITEM	CHARACTERSTICS	TEST METHOD
11.	Heat life test	Appearance : no damage IR : > 50% of Specified Value cap. change : $\leq 3\%$ of initial value $\tan \delta < 0.1\%$	Add 125% of W.V. 105°C -5% after 5'000 hours at Urms or after 3'000 hours at Ur
12.	Sort test	Appearing : No damage Dielectric strength : No damage Capacitance : within the specific Cation D.F : within the specification	Vms $\times\sqrt{2}$ VDC for 3~5 Times discharge.
13.	Epoxy resin filled (UL-94V0)	Flame-resistant epoxy resin cannot overflow Dew the substrate.	By vernier measurement
14.	Storage conditions and duration Packaged capacitors should be kept in clean, ventilated, dry coffers, not near the heat source, not subject to direct sunlight, is strictly prohibited and chemical reagents, acid and harmful gas storage together. Capacitor at a temperature within the range 20 ~ 25 °C , humidity less than 50% of the state of storage for one year.		

8. Marking

- a. w.v.
- b. Capacitance
- c. Capacitance tolerance
- d. Trading mark

224J
100VMP

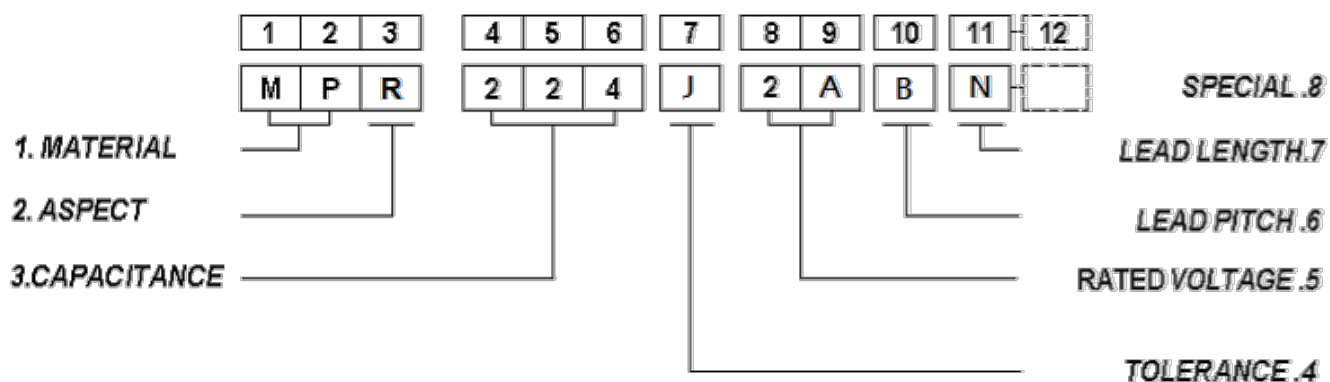
9. Terminal & Dimension

PART NO.	VOLTAGE	CAPACITANCE		DIMENSION				
		SYMBOL	μF	W	T	H	P	d
MPR224G2ABN	100VDC	224	0.22	13.0	6.5	10.0	7.5 $\pm$ 0.8	0.6

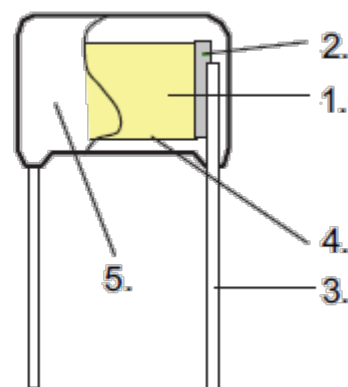


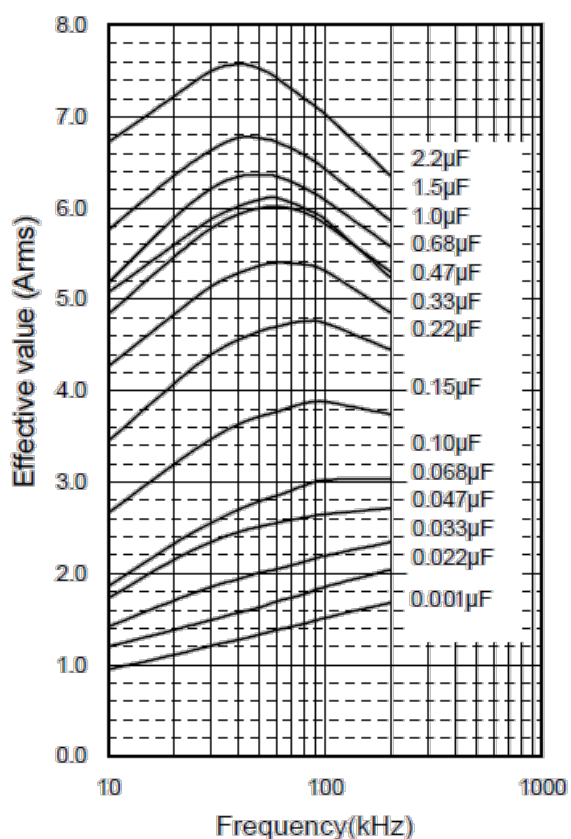
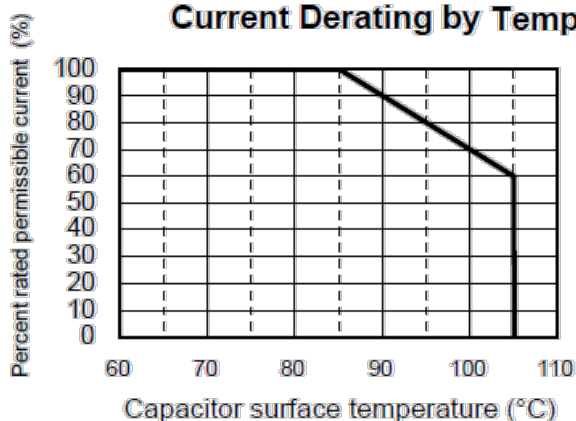
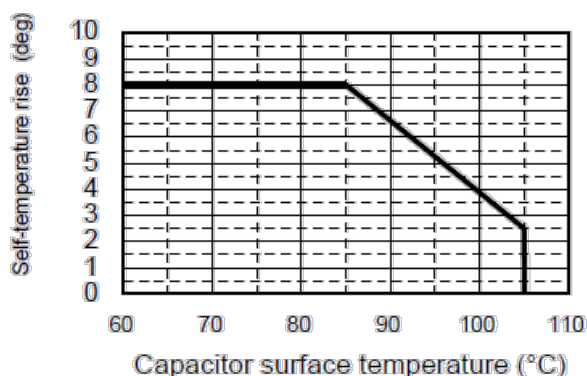
10. (AID) PART NO.

HOW TO ORDER(AID Computer CODE)



1.	DIELECTRIC	Metallized Polypropylene Film
2.	METAL SPRAY	Special Solder
3.	LEAD WIRE	Copper-clad Steel Wire
4.	INNER COATION	Inner Coating UL 94-V0
5.	OUTER COATION	Epoxy Resin



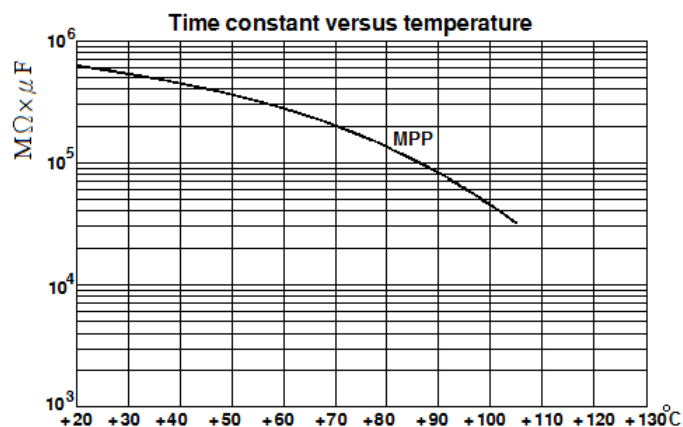
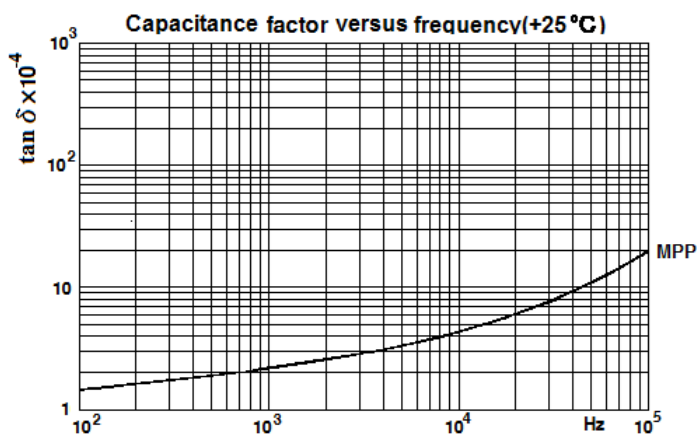
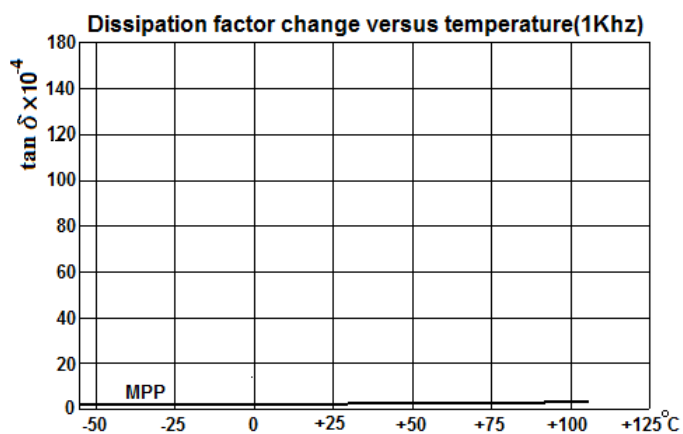
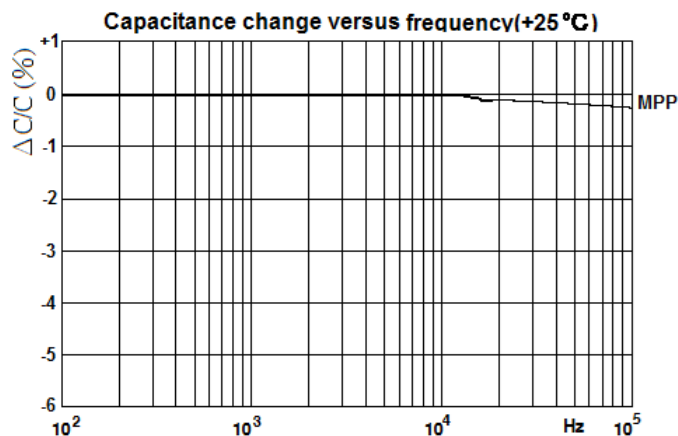
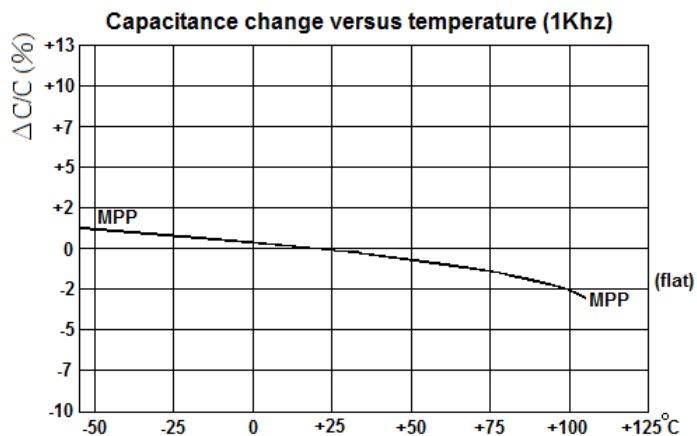
**Type 100VDC series (Metallized Polypropylene Film)****Applicable Specifications****Permissible Current****Current Derating by Temperature****Self-temperature rise by Temperature****Pulse Handling Capability (dv/dt)**

(Max 10000cycles)

Capacitance Value(μF)	code	dV/dt (V/μs)	Current(0-P) (A)	Capacitance Value(μF)	code	dV/dt (V/μs)	Current(0-P) (A)
0.001	102	315	3.1	0.25	254	154	32.4
0.022	223	412	9.1	0.27	274	154	41.6
0.027	273	412	11.1	0.33	334	154	50.8
0.033	333	412	13.6	0.39	394	154	60.1
0.039	393	283	11.0	0.47	474	154	72.4
0.047	473	283	13.3	0.56	564	136	76.2
0.056	563	283	15.8	0.68	684	136	92.5
0.068	683	283	19.2	0.82	824	113	92.7
0.082	823	283	23.2	1.00	105	113	113.0
0.10	104	200	20.0	1.20	125	85	102.0
0.12	124	200	24.0	1.50	155	85	127.5
0.15	154	200	30.0	1.80	185	85	153.0
0.18	184	200	36.0	2.20	225	85	187.0
0.22	224	200	44.0	2.40	245	85	204.0



TEMPERATURE AND FREQUENCY CHARACTERISTICS



MPP= metallized polypropylene

**Guideline of notabilia for the usage of plastic film capacitors****塑膠薄膜電容器的使用上注意事項及指導**

Plastic film capacitors use organic films for their dielectrics, thus the capacitors may fume or flame, depending on the circuit conditions they are in, when they are damaged by applying over-voltage or over-current.

塑膠薄膜電容器使用有機薄膜為介質，當使用超過額定電壓及額定電流，可能產生火焰，導致電容損壞，故請使用於正確的迴路。

1. Circuit Design 迴路設計

- ① Please use capacitors within the range of their characteristic ratings, only after confirming their operating and mounting environments.
請確認電容器的使用範圍僅止於明定之額定特性規範，請先確認電容器使用之環境是否符合規範。
- ② In case of selecting a capacitor, please select the most suitable one which fits to your operating conditions.
請依照適合的作業條件選擇相對應的電容器使用。
- ③ Capacitors used for Across-The-Line, Line-By-Pass and Antenna-Coupling to suppress noises in an equipment, the capacitors need to be approved by overseas Safety Standards or 'Electric Appliance and Material Control' by Ministry of international trade and Industry.
電容器用於跨接，旁路迴路及天線耦合等抑制噪音的裝置，需通過海外安全標準或日本通商產業省之電器用品安全法。
- ④ An applying voltage to a capacitor, including the peak of surge and ripple voltage (D.C. voltage + A.C. Peak), cannot be exceeded therating voltage.
電容器之應用電壓，包括突波和紋波電壓的峰值(直流電壓+交流峰值)不可超過額定電壓。
- ⑤ Do not apply a current over its permissible level. Also, make sure the check the surrounding temperature and inherent temperature rise of a capacitor since a permissible current can be restricted by those factors.
切勿使用超出電容器可承載之電流並檢查電容器周圍之溫度，因有許多因素會影響電流之變化，進而造成電容器之溫度上升。
- ⑥ Please contact FLYING for further details, if mechanical resonance (hum) occurs to a capacitor.
如電容器的發出共振(嗡嗡)之噪音時，請與FLYING聯繫。
- ⑦ Do not conduct a rapid charge and discharge to a capacitor which may lead to characteristics degradations or break down of the capacitor.
請不要對電容器進行快速的充電和放電，此可能會導致電容器之特性退化或損壞。

2. Mounting 安裝

- ① Do not apply any exceeding tension or torsion to lead wires of a capacitor, during the mounting process.
請不要使用任何超過電容導線可承受之張力進行插件。
- ② Please mount a capacitor where it dose not contact any other heating parts, high voltage parts and other parts.
請確認電容器使用環境，避免接觸任何其他升溫熱物件,高壓和其他部分料件。
- ③ Please conduct soldering process by strictly following the specified conditions.
進行焊接過程實，請嚴格遵循指定之焊接條件。

3. Case of an emergency 緊急情況

- ① If a fuming, a flaming or an usual smell occurs from an equipment during its usage, please cut off the power supply by switching It off, pulling the plug out or other methods.
如使用設備有冒煙，火花或冒出不尋常之氣味，請切斷電源，拔掉插頭或以其它方法關閉設備。

4. Storing and handling 儲存和處理

- ① A storage needs to be kept indoors at -10~+40℃ and relative humidity of under 75% without any sudden temperature changes, direct sunlight and corrosive gas around.
需保存於-10 ~ 40℃，相對濕度低於75%並確保沒有任何突然的溫度變化，避免直接陽光之曝曬及接觸腐蝕性氣體之環境。
- ② Do not apply and exceeding vibration, shock (dropping) and pressure.
不應過度震動、碰撞和及外力的衝擊。

5. Rejection 報廢

- ① In case of rejecting capacitors, please seek for professionals who deal with the industrial wastes treatments.
對於報廢電容器，請找處理工業廢品之專業人士處理。