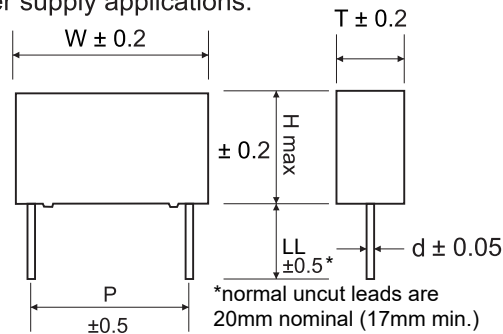


■ INTRODUCTION

Y2X1 Series are constructed with special Metalized/Polypropylene film dielectric, copperplated lead, in plastic case and epoxy resin sealed. They are suitable for Line-By-Pass, antenna coupling, Across-The-Line, spark killer circuits EMI filter and switching power supply applications.



■ DIMENSIONS (mm)

Voltage	300VAC					
Cap. Code	W ±0.3	H ±0.3	T ±0.3	P ±0.5	d ±0.05	
0.0010	102	13	9	4	10	0.6
0.0015	152	13	9	4	10	0.6
0.0022	222	13	10	5	10	0.6
0.0022	222	18	11	5	15	0.8
0.0033	332	13	10	5	10	0.6
0.0033	332	18	11	5	15	0.8
0.0047	472	13	11	5	10	0.6
0.0047	472	18	11	5	15	0.8
0.0056	562	18	11	5	15	0.8
0.0068	682	13	12	6	10	0.6
0.0068	682	18	11	5	15	0.8
0.0082	822	13	13	7	10	0.6
0.0082	822	18	11	5	15	0.8
0.0100	103	13	14	8	10	0.6
0.0100	103	18	11	5	15	0.8
0.0150	153	18	12	6	15	0.8
0.0220	223	18	13	7	15	0.8
0.0330	333	18	15	9	15	0.8
0.0470	473	18	17	10	15	0.8
0.0470	473	26	16	6	22.5	0.8
0.0680	683	18	16	10	15	0.8
0.0680	683	26	16.5	7.5	22.5	0.8
0.0820	823	18	19	11	15	0.8
0.1000	104	26	18	9	22.5	0.8
0.1000	104	31	18	9	27.5	0.8
0.1500	154	26	20	11	22.5	0.8

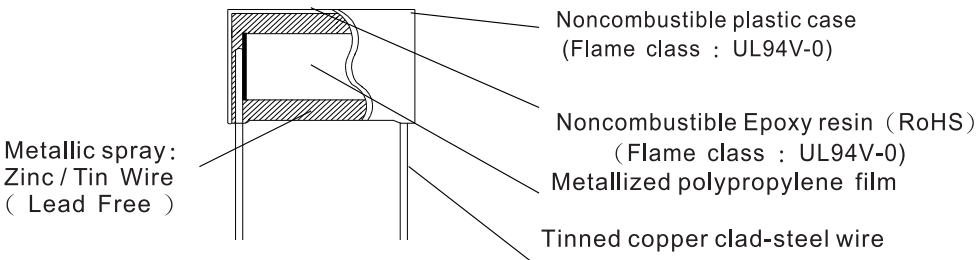
■ FEATURES

- Non-inductive construction
- Self-healing property (Metalized)
- Flame-retardant plastic case and epoxy resin (compliant to UL 94V-0)
- High moisture resistance
- Agency recognized

■ RECOGNITION

Agency	File number	Monogram
UL/CUL	E346827	
ENEC	No.SE/11048-2A	
CQC	CQC11001060988	

Voltage	300VAC					
Cap. Code	W ±0.3	H ±0.3	T ±0.3	P ±0.5	d ±0.05	
0.1500	154	31	18	9	27.5	0.8
0.1800	184	26	20	11	22.5	0.8
0.1800	184	31	21	11	27.5	0.8
0.2200	224	26	24	14	22.5	0.8
0.2200	224	31	22	13	27.5	0.8
0.2700	274	26	24	13.5	22.5	0.8
0.2700	274	31	22	13	27.5	0.8
0.3300	334	26	25	15	22.5	0.8
0.3300	334	31	26	13	27.5	0.8
0.3300	334	41.5	22	12	37.5	1.0
0.3900	394	41.5	24	13	37.5	1.0
0.4700	474	31	29	15.5	27.5	0.8
0.4700	474	41.5	24	13	37.5	1.0
0.5600	564	31	32	16	27.5	0.8
0.5600	564	41.5	26	14.5	37.5	1.0
0.6800	684	31	30.5	20	27.5	0.8
0.6800	684	41.5	30	17	37.5	1.0
0.8200	824	31	37	22	27.5	0.8
0.8200	824	41.5	30	17	37.5	1.0
1.0000	105	31	37	22	27.5	0.8
1.0000	105	41.5	32	19	37.5	1.0

TYPE: Y2/X1		METALLIZED POLYPROPYLENE CAPACITOR	
PRODUCT SPECIFICATION			
1. Scope	Metallized polypropylene dielectric fixed capacitor is approved by UL&CUL, ENEC, and CQC. Related documents: IEC60384-14, EN132400, UL1414 CSA C22.2 No.1, GB/T14472 (1998) Typical applications: interference suppression and <<across-the-line>> applications		
2. Product Range	Operating temperature range.	-40 to + 100°C (IEC60384-14) + 110°C max. (UL&CUL) (including temperature rise on unit surface)	
	Rated voltage	300VAC max. (IEC60384-14) 300VAC max. (UL&CUL) 1000VDC max.	
	Capacitance	Measured @ 1.0 ± 0.2KHz @25°C, 1 Vrms	
3. Appearance	1. Marking shall be legible. 2. Plated lead-wire, no rust. 3. Coating shall be without crack, pinhole.		
4. Construction	Non-inductive construction, wound with Metallized polypropylene film dielectric. <div style="display: flex; align-items: center; justify-content: center;">  </div>		
5. Conditional Standard Test	The test temperature of from 15°C to 35°C, RH45 to 75%.		
CHARACTERISTICS			
NO.	Item	Performance	
1.	Tensile Termination Strength	<ul style="list-style-type: none"> Straight lead pull gradually for 10 ± 1 second No broken or 100se terminations shall be found 	IEC 60384-14-4.3 (IEC 60384-1-4.13)
2.	Termination Bending Strength	<ul style="list-style-type: none"> Lead wire to be bent 90°C in opposing directions, one time No broken or loose terminations shall be found 	IEC 6038-14-4.4.3 (IEC 6038-1-4.13)
3.	Vibration Test	<ul style="list-style-type: none"> 10Hz to 55Hz, amplitude 1.5mm, 1 minute test cycle Test duration 2 hours, 3 mutually perpendicular directions Electrical, Visual inspection during last 30 min in each direction No opens or shorts, no mechanical damage 	IEC 60384-14-4.7 (IEC 60384-1-4.17) IEC 6008-2-6 Test Fc
4.	Solderability	<ul style="list-style-type: none"> Solder dip at 235 ± 5°C for 2 ± 0.5 sec, Depth 1.5+0.5mm from bottom of cap body 95% tinning 	IEC 60384-14-4.5 (IEC 60384-1-4.15) IEC 60068-2-20 Test Ta
5.	Soldering Heat Resistance	<ul style="list-style-type: none"> Solder dip up to 1.5 +0.5mm from terminal root using heat shielding solder temp 350°C ± 10°C for 3.5 ± 0.5 sec, or 260 ± 5°C for 10 ± 1sec, Cool down to room temp 1 ± 5 hours ΔC/C ≤ ± 3% of starting value 	IEC 60384-14-4.4 (IEC 60384-1-4.14) IEC 60068-2-20 Test Tb

CHARACTERISTICS															
NO.	Item	Performance													
6.	Cold Resistance	<ul style="list-style-type: none"> • Test box - $40 \pm 3\%$ for 2 hours. Room Temp 1.5 ± 0.5 hours • $\Delta C/C \leq \pm 5\%$ of starting value 	IEC 60384-14-11.4 IEC 60068-2-1												
7.	Dry Heat Resistance	<ul style="list-style-type: none"> • Test box $+110 \pm 2^\circ\text{C}$ for 2 hours, RoomTemp 1.5 ± 0.5 hours • $I_R \geq 50\%$ of starting value • $\Delta C/C \leq \pm 5\%$ of starting value 	IEC 60384-14-4.11.2 (IEC 60384-1-4.21.2 IEC 60068-2-2												
8.	Humidity Resistance	<ul style="list-style-type: none"> • 90-95° RH at $+40 \pm 2^\circ\text{C}$ for 56 days • Room Temp/RH for 1.5 ± 0.5 hours • No failure with 1500Vac applied for 1 min • $I_R \geq 50\%$ of specified value • $\Delta C/C \leq \pm 5\%$ of specified value • $DF \leq 0.15\%$ @ 1KHz 	IEC 60384-14-4.12 (IEC 60384-1-4.22 IEC 60068-2-3												
9.	Impulse Voltage	<ul style="list-style-type: none"> • 24 Impulses of 5KVdc • No permanent breakdown or flashover • After impulse test capacitor is to be exposed to high temp loading 	IEC 60384-14-4.13												
10.	High Temp Loading	<ul style="list-style-type: none"> • 1000 hour @ 110°C @ 170% of rated voltage, ea hour cycle voltage to 1000 Vrms for 0.1 sec • No failures when 1500 Vac for 1 min-Terminal to Terminal • No failures when 1500 Vac for 1 min-Terminal to Enclosure • $I_R \geq 50\%$ spec, between terminals • $DF \leq 0.15\%$ @ 1KHz 	IEC 60384-14-4.14												
UL/CSA															
1.	Across-the-line discharge test	<ul style="list-style-type: none"> • Apply 240VAC 60Hz to capacitor, and pulse 5K Vdc from Dump capacitor 4 times with 5 sec interval between discharges, maintain 240 VAC for 30 sec after Last pulse • No glowing, flame, or expulsion of material from the capacitor <table border="1"> <thead> <tr> <th>Capacitor Under test (Ct)</th> <th>Dump capacitor (Vdc)</th> <th>Applied voltage (Vdc)</th> </tr> </thead> <tbody> <tr> <td>0.001~0.005 μF</td> <td>0.005 μF</td> <td rowspan="4">$5000 \cdot (C_d + C_t)$ Cd</td> </tr> <tr> <td>0.0051~0.05 μF</td> <td>0.05 μF</td> </tr> <tr> <td>0.051~0.5 μF</td> <td>0.5 μF</td> </tr> <tr> <td>0.51~1.0 μF</td> <td>1.0 μF</td> </tr> </tbody> </table>	Capacitor Under test (Ct)	Dump capacitor (Vdc)	Applied voltage (Vdc)	0.001~0.005 μF	0.005 μF	$5000 \cdot (C_d + C_t)$ Cd	0.0051~0.05 μF	0.05 μF	0.051~0.5 μF	0.5 μF	0.51~1.0 μF	1.0 μF	UL1414.13 CSA C22.2 NO.1 10.5.1
Capacitor Under test (Ct)	Dump capacitor (Vdc)	Applied voltage (Vdc)													
0.001~0.005 μF	0.005 μF	$5000 \cdot (C_d + C_t)$ Cd													
0.0051~0.05 μF	0.05 μF														
0.051~0.5 μF	0.5 μF														
0.51~1.0 μF	1.0 μF														
2.	Line-by-pass Discharge Test	<ul style="list-style-type: none"> • 10K Vdc pulse from 0.001μF Capacitor, 5 second interval between pulses • No abnormal condition terminal-terminal or terminal to case when 1,000VAC applied for 1 minute 	UL1414.16 CSA C22.2 NO.1 6.12.2												
3.	Damp Heat Insulation	<ul style="list-style-type: none"> • $93 \pm 2\%$ RH for 48 hours. 20 to 30°C • $I_R = 2\text{M}\Omega$ or more @ 250Vdc 	UL1283.29												
4.	Flame test	<ul style="list-style-type: none"> • Apply flame for 15 sec, remove, capacitor no flame after 15 seconds repeat 3 times, no flame after 60 seconds • See UL test procedure for more detail 	UL1414.9												

SPECIFICATIONS SUMMARY

Type	Performance
Operating Temperature Range	-40°C ~ + 110°C
Climatic Category	40/110/56/B
Capacitance Range (25°C)	0.001μF ~ 1μF
Capacitance Tolerance	±10%(K), ±20%(M)
Rated Voltage	300V _{AC}
Dissipation Factor at 20 °C and 1KHz	0.2% or less
Insulation resistance	100,000 MΩ or more (25°C)
dv/dt (v/μ sec) at Vdc	800, Ls=10mm 400, Ls=27.5mm 600, Ls=15mm 300, Ls=37.5mm 500, Ls=22.5mm

STRAIGHT LEAD SPACING (P)

* Leadspac is straight lead non-formed original leadspac.

mm	10	15	22.5	27.5	37.5
Code	100	150	225	275	375

LEAD LENGTH (LL) FROM SEATING PLANE

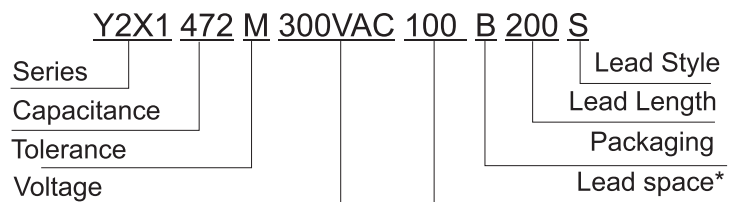
mm	5	10	15	20
Code	050	100	150	200

*20mm is normal for uncut leads

LEAD STYLE

CODE	STYLE
S	Straight

PART NUMBER EXAMPLE



* Leadspac is straight lead non-formed original leadspac.

TOLERANCE

10%	20%
K	M

