

## Construction

Multilayer metallized paper encapsulated and impregnated in self-extinguishing material meeting the requirements of UL 94V-0.

## Benefits

- Approvals: ENEC, UL, CSA
- Rated Voltage: 275VAC 50/60Hz
- Capacitance X Value: 0.1 $\mu$ F and 0.15 $\mu$ F
- Capacitance Y Value: 2200pF, 3300pF and 4700pF
- Pitch: 20 mm
- Capacitance Tolerance:  $\pm$  20%
- Climatic Category: 40/100/56/B, IEC 60068-1
- Tape and reel packaging in accordance with IEC 60286-2
- RoHS compliance and lead-free terminations
- Operating temperature range of -40°C to +100°C
- 100% screening factory test at 2150VDC/1500VAC
- Excellent self-healing properties ensure long life even when subjected to frequent overvoltages
- Good resistance to ionization due to impregnated paper dielectric
- High dU/dt capability
- Impregnated paper ensures excellent stability and reliability properties, particularly in applications with continuous operation

## Applications

Interference suppressors with X2 + 2xY2 capacitors in a delta configuration.



## Ordering Information

PZB300	M	C	11	R30
Series	Rated Voltage	Pitch	Capacitance Code (pF)	Packing Option and Leadform
Delta EMI, X2 +2xY2, Metallized Paper	M = 275VAC	C = 20.0	The first digit indicates the value of the X capacitor: 1 = 0.10 $\mu$ F 2 = 0.15 $\mu$ F The second digit indicates the value of the Y capacitors: 1 = 2200pF 2 = 3300pF 3 = 4700pF	see Table 1

## Ordering Options Table

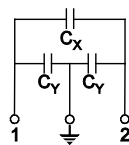
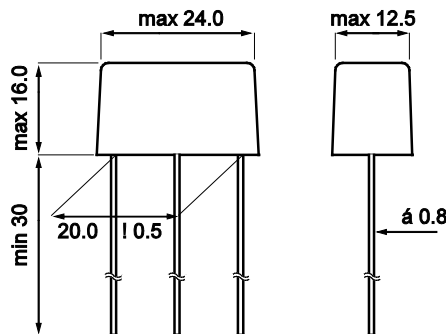
Standard Packaging Style	Lead Length	Ordering Code
	(mm)	
Loose, long leads	30 <sup>+5</sup>	R30
Other options available on request		

## Dimension Table

Pitch	Outer Dimension		
	B	H	L
20.0	12.5	16.0	24.0

## Leadspacing Table

p	d	min l
20.0 ± 0.4	0.8	30



## Technical Data

Rated Voltage	275VAC 50/60Hz	
Capacitance Range	0.1 $\mu$ F and 0.15 $\mu$ F	
Capacitance Tolerance	$\pm$ 20%	
Temperature Range	-40 to +100°C	
Climatic Category	40/100/56/B	
Approvals	ENEC, UL, CSA	
Dissipation Factor	Maximum Values at +23°C	
	1 kHz	1.3%
Test Voltage Between Terminals	<p>The 100% screening factory test is carried out at 2150VDC for X2 capacitors and 3000VDC for Y2 capacitors. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test. This test may not be repeated due to potential capacitor damage. KEMET is not liable in such case for any failures.</p>	
Insulation Resistance	12,000M $\Omega$	

## Environmental Test Data

Test	IEC Publication	Procedure
Vibration	IEC 60068-2-6 Test Fc	3 directions at 2 hours each, 10Hz-500Hz at 0.75 mm or 98 m/s <sup>2</sup> (PZB300MCx mounted on PC board)
Bump	IEC 60068-2-29 Test Eb	4000 bumps at 390 m/s <sup>2</sup>
Solderability	IEC 60068-2-20 Test Ta	Solder globule method Wetting time < 1s
Active Flammability	IEC 60384-14	UR + 20 surge pulses at 2.5kV (pulse every 5s)
Passive Flammability	IEC 60384-14	IEC 60384-1, IEC 60695-11-5 Needle Flame Test
Humidity	IEC 60068-2-3 Test Ca	+40°C and 90-95% R.H., 56 days



## Environmental Compliance

All KEMET EMI capacitors are RoHS compliant



RoHS Compliant

## Approvals

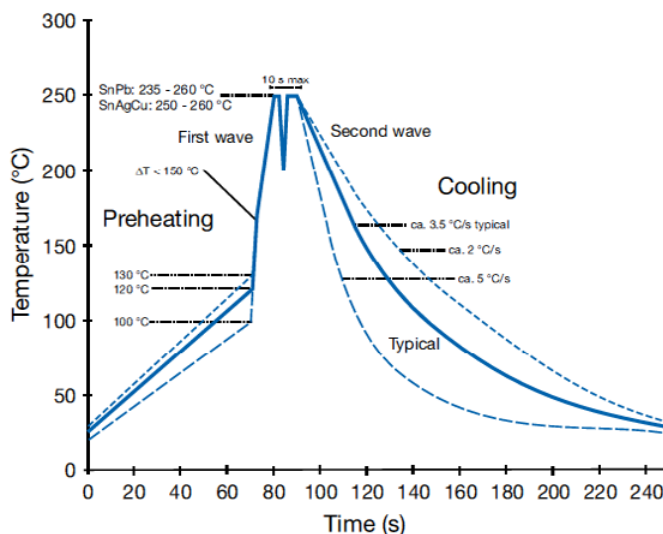
Mark	Specification	File Number
	EN/IEC 60384-14	SE/0140-24B
	UL 1283	E100117
	CSA - C22.2 No.8	E100117

**Table 1 – Ratings & Part Number Reference**

Lead Space	Cap Value X ( $\mu$ F)	Cap Value Y (pF)	B (mm)	H (mm)	L (mm)	dV/dt (V/ $\mu$ sec) X	dV/dt (V/ $\mu$ sec) Y	F Article Code	Part Number
20.0	0.10	2200	12.5	16.0	24.0	600	1000	P300PL104M275AC222	PZB300MC11R30
20.0	0.10	3300	12.5	16.0	24.0	600	1000	P300PL104M275AC332	PZB300MC12R30
20.0	0.10	4700	12.5	16.0	24.0	600	1000	P300PL104M275AC472	PZB300MC13R30
20.0	0.15	2200	12.5	16.0	24.0	600	1000	P300PL154M275AC222	PZB300MC21R30
20.0	0.15	3300	12.5	16.0	24.0	600	1000	P300PL154M275AC332	PZB300MC22R30
20.0	0.15	4700	12.5	16.0	24.0	600	1000	P300PL154M275AC472	PZB300MC23R30
Lead Space	Cap Value X ( $\mu$ F)	Cap Value Y (pF)	B (mm)	H (mm)	L (mm)	dV/dt (V/ $\mu$ sec) X	dV/dt (V/ $\mu$ sec) Y	F Article Code	Part Number

## Soldering Process

The implementation of RoHS Directive has forced to select SnAuCu (SAC) alloys or SnCu alloys as primary solder. This has increased the liquidus temperature from that of 183°C for SnPb eutectic alloy to 217–221°C for the new alloys. This means that the heat stress to components, even in wave soldering, has increased considerably due to higher pre-heat and wave temperatures. The Polypropylene Capacitors are especially sensitive to heat (melting point of Polypropylene is 160–170°C). The wave soldering can be destructive especially for mechanically small Polypropylene Capacitors (lead spacings 5-10 mm), and great care has to be taken when soldering them. The recommended solder profiles from KEMET should be used. In case of doubt, KEMET should be consulted. In general the wave soldering curve from IEC Publication 61760-1 edition 2 gives a good guideline for successful soldering.



## Marking

- Manufacturer's logo
- Article series
- Rated capacitance
- Rated voltage
- Capacitor class
- Approval marks
- Manufacturing date code
- IEC climatic category
- Passive flammability class
- Circuit diagram

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Milan, Italy  
Tel: 39-02-57518176

Rome, Italy  
Tel: 39-06-23231718

Madrid, Spain  
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Tel: 49-2307-3619672

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Weymouth, United Kingdom  
Tel: 44-1305-830747

Coatbridge, Scotland  
Tel: 44-1236-434455

Färjestaden, Sweden  
Tel: 46-485-563934

Espoo, Finland  
Tel: 358-9-5406-5000

## Asia

### Northeast Asia

Hong Kong  
Tel: 852-2305-1168

Shenzhen, China  
Tel: 86-755-2518-1306

Beijing, China  
Tel: 86-10-5829-1711

Shanghai, China  
Tel: 86-21-6447-0707

Taipei, Taiwan  
Tel: 886-2-27528585

### Southeast Asia

Singapore  
Tel: 65-6586-1900

Penang, Malaysia  
Tel: 60-4-6430200

Bangalore, India  
Tel: 91-806-53-76817

*Note: KEMET reserves the right to modify minor details of internal and external construction at any time in the interest of product improvement. KEMET does not assume any responsibility for infringement that might result from the use of KEMET Capacitors in potential circuit designs. KEMET is a registered trademark of KEMET Electronics Corporation.*

## Other KEMET Resources

Tools	
Resource	Location
Configure A Part: CapEdge	<a href="http://capacitoredge.kemet.com">http://capacitoredge.kemet.com</a>
SPICE & FIT Software	<a href="http://www.kemet.com/spice">http://www.kemet.com/spice</a>
Search Our FAQs: KnowledgeEdge	<a href="http://www.kemet.com/keask">http://www.kemet.com/keask</a>

Product Information	
Resource	Location
Products	<a href="http://www.kemet.com/products">http://www.kemet.com/products</a>
Technical Resources (Including Soldering Techniques)	<a href="http://www.kemet.com/technicalpapers">http://www.kemet.com/technicalpapers</a>
RoHS Statement	<a href="http://www.kemet.com/rohs">http://www.kemet.com/rohs</a>
Quality Documents	<a href="http://www.kemet.com/qualitydocuments">http://www.kemet.com/qualitydocuments</a>

Product Request	
Resource	Location
Sample Request	<a href="http://www.kemet.com/sample">http://www.kemet.com/sample</a>
Engineering Kit Request	<a href="http://www.kemet.com/kits">http://www.kemet.com/kits</a>

Contact	
Resource	Location
Website	<a href="http://www.kemet.com">www.kemet.com</a>
Contact Us	<a href="http://www.kemet.com/contact">http://www.kemet.com/contact</a>
Investor Relations	<a href="http://www.kemet.com/ir">http://www.kemet.com/ir</a>
Call Us	1-877-MyKEMET
Twitter	<a href="http://twitter.com/kemetcapacitors">http://twitter.com/kemetcapacitors</a>

## Disclaimer

All product specifications, statements, information and data (collectively, the "Information") are subject to change without notice.

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Although we design and manufacture our products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

