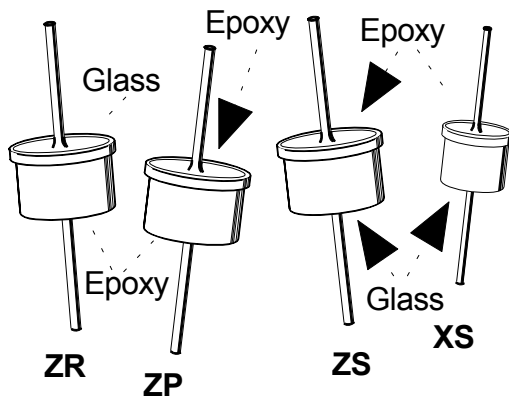


## Solder-In Filters

Solder-In types are ideal for use where extremely small size is a necessity and or where hermeticity is required in bulkhead applications. Hermetic styles come with a fused glass to metal seal on one end and an epoxy seal on the other. The most common style, with the glass seal on the barrel end, is our **ZS** style. The **ZR** style has the glass seal on the flange end, sometimes known as being in the “Reverse” position. Although most solder-ins that are sold are hermetic, there is the more inexpensive non-hermetic **ZP** version, often used for applications where hermeticity is not required. See our catalog page “**Solder-In Body Reference**” for dimensions. Below is a short discussion of the different types with links to specific products:



DESCRIPTION	STYLE
New! Smallest Solder-In!	<b>XS</b>
Lowest Cost, Non-Hermetic	<b>ZP</b>
“Reverse” Hermetic	<b>ZR</b>
Most Popular	<b>ZS</b>

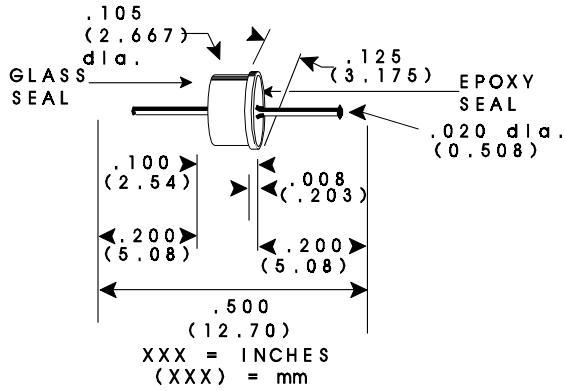
**“Hermetic”**; Have leak rates less than or equal to  $1 \times 10^{-7}$  atm cc/sec. The threaded end is permanently sealed by glass fusion. The cylindrical end is sealed with a glass to metal seal soldered in place. Prevents the transmission of air, moisture vapor or other gasses through the filter.

**“Non-Hermetic”**; Designed to pass gross leak testing. Epoxy sealed on both ends. This style is less expensive than hermetic types.

# XS SERIES HERMETIC "C" FILTER

## .105" DIAMETER SOLDER-IN FILTER

.105" SOLDER-IN  
"C" CIRCUIT



STANDARD XS DIMENSIONS

Dimension Tolerances:

Case: +/- .003" (+/- .076mm) Lead Length: +/- .025" (+/- .635mm)  
Lead Dia.: +/- .002" (+/- .051mm)

Installation Temp:

300°C max. Recommend @ 225°C to 250°C.

Material and Finish:

Steel case, Alloy 52 lead, gold plating per MIL-G-45204,  
Type III, Grade "A", Class 1 standard. (Suitable for wire bond.)

Marking:

Color dots standard. Custom marking available.

Cap /Tolerance:

0pF-.033µF +100/-0%  
Other tolerances available.

Dissipation Factor:

3.5% Maximum

Insulation Resistance:

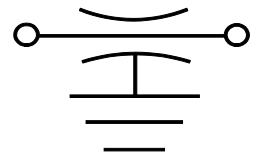
10,000 Megohm or 1,000 Megohm-µF  
whichever is less @ 25°C, WVDC.

Dielectric Strength (DWV):

250% of Rated Voltage for 5 sec.

Operating Temp:

-55°C to +125°C



EMI PART NUMBER	CAP "C" CKT	COLOR DOT	MAX WVDC	DC AMPS	MIN. NO LOAD INSERTION LOSS (dB) @ 25°C PER MIL-STD-220				
					1MHZ	10MHZ	100MH	1GHZ	10GHZ
XSC000D	"0" pF	NONE	200	10	-	-	-	-	-
XSC050D	5 pF	2 ORANGE	200	10	-	-	-	-	-
XSC100D	10 pF	VIOLET	200	10	-	-	-	5	20
XSC250D	25 pF	BLUE	200	10	-	-	-	10	25
XSC101D	100 pF	GREEN	200	10	-	-	3	20	28
XSC501D	500 pF	BROWN	200	10	-	-	15	35	40
XSC102D	1,000 pF	WHITE	200	10	-	5	20	35	45
XSC122D	1,200 pF	WHITE	200	10	-	5	20	35	45
XSC272D	2,700 pF	RED	200	10	5	10	25	40	50
XSC502B	5,000 pF	YELLOW	100	10	7	17	35	47	55

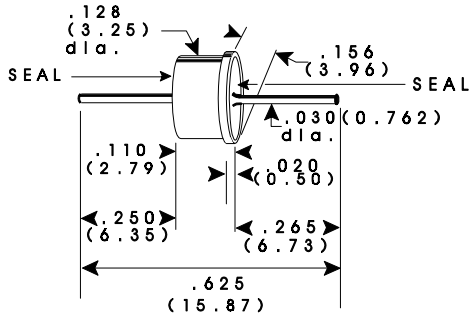


	<b>EMI FILTER COMPANY</b>
	12750 59th Way North
	Clearwater, FL 33760
	727-585-7990 Fax: 727-586-5138
	Toll Free: 1-800-323-7990
email: sales@emifiltercompany.com	

# ZP SERIES NON-HERMETIC "C" FILTER

.128" DIAMETER SOLDER-IN FILTER

.128" SOLDER-IN  
"C" CIRCUIT



XXX = INCHES  
(XXX) = mm  
SILVER FINISH STANDARD  
STANDARD ZP DIMENSIONS

Cap /Tolerance:

0pF-.033μF +100/-0%  
Other tolerances available.

Dissipation Factor:

3.0% Maximum

Insulation Resistance:

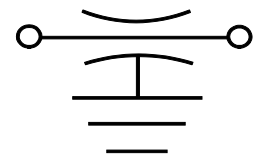
10,000 Megohm or 1,000 Megohm-μF  
whichever is less @ 25°C, WVDC.

Dielectric Strength (DWV):

250% of Rated Voltage for 5 sec.

Operating Temp:

-55°C to +125°C



Dimension Tolerances:

Case: +/- .005" (+/- .127mm) Lead Length: +/- .030" (+/- .762mm) Lead Dia.: +/- .002" (+/- .051mm)

Installation Temp:

300°C max. Recommend @ 225°C to 250°C.

Material and Finish:

Steel case, Alloy 52 lead, Silver plated standard.  
Variations are available.

Marking:

EMI PART NUMBER	CAP "C" CKT	COLOR DOT	MAX WVDC	DC AMPS	MIN. NO LOAD INSERTION LOSS (dB) @ 25°C PER MIL-STD-220				
					1MHz	10MHz	100MHz	1GHz	10GH
ZPC000D	"0" pF	NONE	200*	10	-	-	-	-	-
ZPC050D	5 pF	2 ORANGE	200*	10	-	-	-	-	-
ZPC100D	10 pF	VIOLET	200*	10	-	-	-	5	20
ZPC250D	25 pF	BLUE	200*	10	-	-	-	10	25
ZPC101D	100 pF	GREEN	200*	10	-	-	3	20	28
ZPC501D	500 pF	BROWN	200*	10	-	-	15	35	40
ZPC102D	1,000 pF	WHITE	200	10	-	5	20	35	45
ZPC122D	1,200 pF	WHITE	200	10	-	5	20	35	45
ZPC272D	2,700 pF	RED	200	10	5	10	25	40	50
ZPC502B	5,000 pF	YELLOW	100	10	5	15	30	45	55
ZPC103B	.01 μF	2 WHITE	100	10	6	21	35	50	60
ZPC153B	.015 μF	2 WHITE	100	10	8	20	35	55	60
ZPC273A	.027 μF	2 RED	50	10	10	28	42	65	65
ZPC333A	.033 μF	2 RED	50	10	11	30	44	65	65



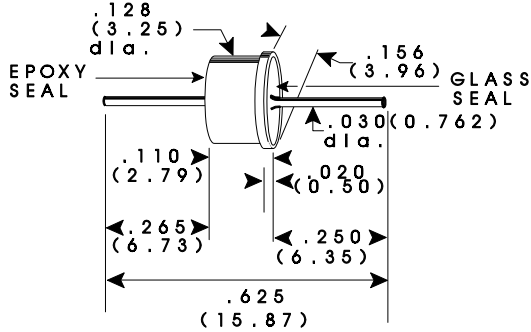
**EMI FILTER COMPANY**  
12750 59th Way North  
Clearwater, FL 33760  
727-585-7990 Fax: 727-586-5138  
Toll Free: 1-800-323-7990  
email: sales@emifiltercompany.com

\* = HIGH VOLTAGE VARIANT AVAILABLE

# ZR SERIES HERMETIC "C" FILTER

.128" DIA. SOLDER-IN FILTER

.128" SOLDER-IN  
"C" CIRCUIT



XXX = INCHES  
(XXX) = mm

**STANDARD ZR DIMENSIONS**

Dimension Tolerances:

Case: +/- .005" (+/- .127mm) Lead Length: +/- .030" (+/- .762mm) Lead Dia.: +/- .002" (+/- .051mm)

Installation Temp:

300°C max. Recommend @ 225°C to 250°C.

Material and Finish:

Steel case, Alloy 52 lead, gold plating per MIL-G-45204, Type II, Class 0 standard. Variations are available.

Marking:

Color dots standard. Custom marking available.

Cap /Tolerance:

0pF-.033µF +100/-0%  
Other tolerances available.

Dissipation Factor:

3.5% Maximum

Insulation Resistance:

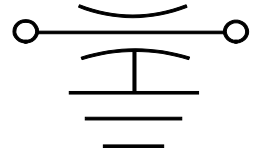
10,000 Megohm or 1,000 Megohm-µF  
whichever is less @ 25°C, WVDC.

Dielectric Strength (DWV):

250% of Rated Voltage for 5 sec.

Operating Temp:

-55°C to +125°C



EMI PART NUMBER	CAP "C" CKT	COLOR DOT	MAX WVDC	DC AMPS	MIN. NO LOAD INSERTION LOSS (dB) @ 25°C PER MIL-STD-220				
					1MHz	10MHz	100MHz	1GHz	10GHz
ZRC000D	"0" pF	NONE	200*	10	-	-	-	-	-
ZRC050D	5 pF	2 ORANGE	200*	10	-	-	-	-	-
ZRC100D	10 pF	VIOLET	200*	10	-	-	-	5	20
ZRC250D	25 pF	BLUE	200*	10	-	-	-	10	25
ZRC101D	100 pF	GREEN	200*	10	-	-	3	20	28
ZRC501D	500 pF	BROWN	200*	10	-	-	15	35	40
ZRC102D	1,000 pF	WHITE	200	10	-	5	20	35	45
ZRC122D	1,200 pF	WHITE	200	10	-	5	20	35	45
ZRC272D	2,700 pF	RED	200	10	5	10	25	40	50
ZRC502B	5,000 pF	YELLOW	100	10	5	15	30	45	55
ZRC103B	.01 µF	2 WHITE	100	10	6	21	35	50	60
ZRC153B	.015 µF	2 WHITE	100	10	8	20	35	55	60
ZRC273A	.027 µF	2 RED	50	10	10	28	42	65	65
ZRC333A	.033 µF	2 RED	50	10	11	30	44	65	65

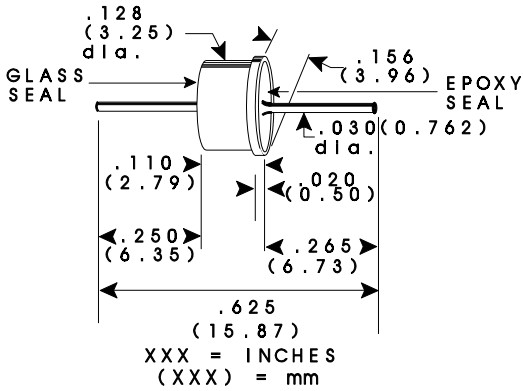
\* = HIGH VOLTAGE VARIANT AVAILABLE

	<p><b>EMI FILTER COMPANY</b> 12750 59th Way North Clearwater, FL 33760 727-585-7990 Fax: 727-586-5138 Toll Free: 1-800-323-7990 email: sales@emifiltercompany.com</p>
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# ZS SERIES HERMETIC "C" FILTER

## .128" DIAMETER SOLDER-IN FILTER

.128" SOLDER-IN  
"C" CIRCUIT



Cap /Tolerance:

OpF-.033μF +100/-0%  
Other tolerances available.

Dissipation Factor:

3.5% Maximum

Insulation Resistance:

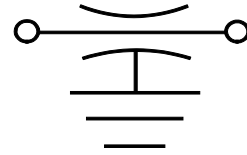
10,000 Megohm or 1,000 Megohm-μF  
whichever is less @ 25°C, WVDC.

Dielectric Strength (DWV):

250% of Rated Voltage for 5 sec.

Operating Temp:

-55°C to +125°C



Dimension Tolerances:

Case: +/- .005" (+/- .127mm) Lead Length: +/- .030" (+/- .762mm)  
Lead Dia.: +/- .002" (+/- .051mm)

Installation Temp:

300°C max. Recommend @ 225°C to 250°C.

Material and Finish:

Steel case, Alloy 52 lead, gold plating per MIL-G-45204, Type II, Class 0 standard.  
Variations are available.

Marking:

Color dots standard. Custom marking available.

EMI PART NUMBER	CAP "C" CKT	COLOR DOT	MAX WVDC	DC AMPS	MIN. NO LOAD INSERTION LOSS (dB) @ 25°C PER MIL-STD-220				
					1MHz	10MHz	100MH	1GHz	10GHz
ZSC000D	"0" pF	NONE	200*	10	-	-	-	-	-
ZSC050D	5 pF	2 ORANGE	200*	10	-	-	-	-	-
ZSC100D	10 pF	VIOLET	200*	10	-	-	-	5	20
ZSC250D	25 pF	BLUE	200*	10	-	-	-	10	25
ZSC101D	100 pF	GREEN	200*	10	-	-	3	20	28
ZSC501D	500 pF	BROWN	200*	10	-	-	15	35	40
ZSC102D	1,000 pF	WHITE	200	10	-	5	20	35	45
ZSC122D	1,200 pF	WHITE	200	10	-	5	20	35	45
ZSC272D	2,700 pF	RED	200	10	5	10	25	40	50
ZSC502B	5,000 pF	YELLOW	100	10	5	15	30	45	55
ZSC103B	.01 μF	2 WHITE	100	10	6	21	35	50	60
ZSC153B	.015 μF	2 WHITE	100	10	8	20	35	55	60
ZSC273A	.027 μF	2 RED	50	10	10	28	42	65	65
ZSC333A	.033 μF	2 RED	50	10	11	30	44	65	65

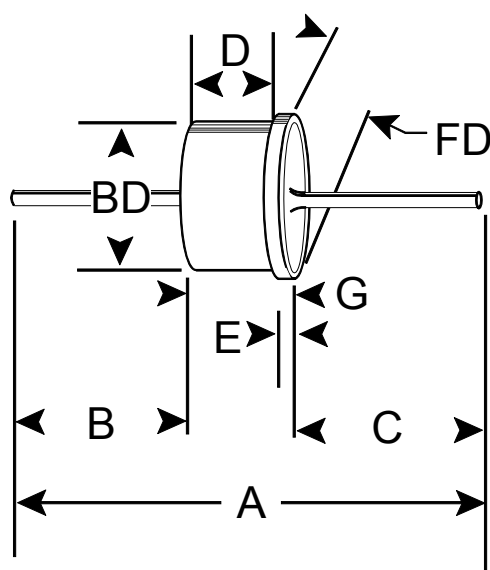


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\* = HIGH VOLTAGE VARIANT AVAILABLE

## EMI FILTER COMPANY SOLDER-IN BODY REFERENCE

Body Style	Glass Seal	Std. Finish	Alt. Finishes	Lead Dia.	A	B	C	D	E	BD	FD	G
<b>XS</b>	Barrel end	Gold	Ag, Sn/Pb	.020"	.500"	.200"	.200"	.092"	.008"	.105"	.125"	.100"
<b>ZP</b>	None	Silver	Au, Sn/Pb	.040"	.625"	.250"	.250"	.090"	.020"	.128"	.156"	.110"
<b>ZR</b>	Flange end	Gold	Ag, Sn/Pb	.040"	.625"	.250"	.250"	.090"	.020"	.128"	.156"	.110"
<b>ZS</b>	Barrel end	Gold	Ag, Sn/Pb	.040"	.625"	.250"	.250"	.090"	.020"	.128"	.156"	.110"



### SOLDER - IN DIMENSIONS

Body Style	Max. Cap.	Page
XS	2700 pF	<b>39</b>
ZP	.033FF	<b>40</b>
ZR	.033FF	<b>41</b>
ZS	.033FF	<b>42</b>

	<p><b>EMI FILTER COMPANY</b>                  9075-C 130TH AVENUE NORTH                  LARGO, FLORIDA 33773 USA                  1-800-323-7990                  727-585-7990 Fax: 727-586-5138                  e-mail: Sales@emifiltercompany.com                  WWW.EMIFILTERCOMPANY.COM</p>
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