

## Beam Lead Capacitors

Rev. V1

### Features

- High Working Voltage: 50 V
- Wide Range of Capacitance: 0.1 - 100 pF
- Excellent Stability
- RoHS\* Compliant



### Description

The 90 series of capacitors feature high stand-off voltage and low dielectric loss due to our use of nitride/oxide dielectric layers. Gold bonding surfaces, top and bottom provide ease of bonding and minimum contact resistance. These capacitors have high insulation resistance, low dissipation factor, and low temperature coefficient, which are features that produce devices with excellent long term stability.

The 90 series capacitors are capable of meeting the environmental requirements of MIL-STD-750 and MIL-STD-883.

Suitable for DC Block and RF bypass applications.

### Ordering Information<sup>1</sup>

Part #	Packaging
As listed in the table	400 pc Waffle Pack

- The part number for the 90 family of capacitors consists of 4 to 8 characters. The left most two characters identify the product family. Characters in positions 3, 4 and 6 (and 7 on the 90100R0M) indicate the nominal capacitance value of the capacitor, in pF. The rightmost character indicates the capacitance tolerance.

For example: 9010R0M

- “90” indicates working voltage is 50 V.
- “10R” indicates the nominal capacitance value is 10.0 pF (the character “R” represents the radix point).
- “M” indicates the capacitance tolerance is +20% of the nominal value.
- Where there is no rightmost character the nominal capacitance is within the range listed in the table.

### Handling Procedures

Please observe the following precautions to avoid damage:

### Static Sensitivity

These electronic devices are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

### Capacitance Values @ 50 V

Model # <sup>2</sup>	Capacitance (pF)	Package Style
90R1 thru 90R9	0.1 to 0.9 pF	CS14-1
901R0 thru 901R5	1.0 to 1.5 pF	CS14-1
90R5 thru 901R0	0.5 to 1.0 pF	CS14-2
901R0 thru 902R2	1.0 to 2.2 pF	CS14-2
902R2 thru 904R7	2.2 to 4.7 pF	CS14-2
905R6M	5.6	CS14-2
906R8M	6.8	CS14-2
908R2M	8.2	CS14-2
9010R0M	10	CS14-3
9015R0M	15	CS14-3
9022R0M	22	CS14-3
9033R0M	33	CS14-3
9047R0M	47	CS14-4
9068R0M	68	CS14-4
9082R0M	82	CS14-4
90100R0M	100	CS14-4

- Model #'s that end with “M” indicates the capacitance tolerance is ±20% of the nominal value.

### Absolute Maximum Ratings<sup>3,4</sup>

Parameter	Absolute Maximum
Operating Temperature	-55°C to +150°C
Storage Temperature	-65°C to +200°C

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- MACOM does not recommend sustained operation near these survivability limits.

\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

# 90Rx - 90xRx Series

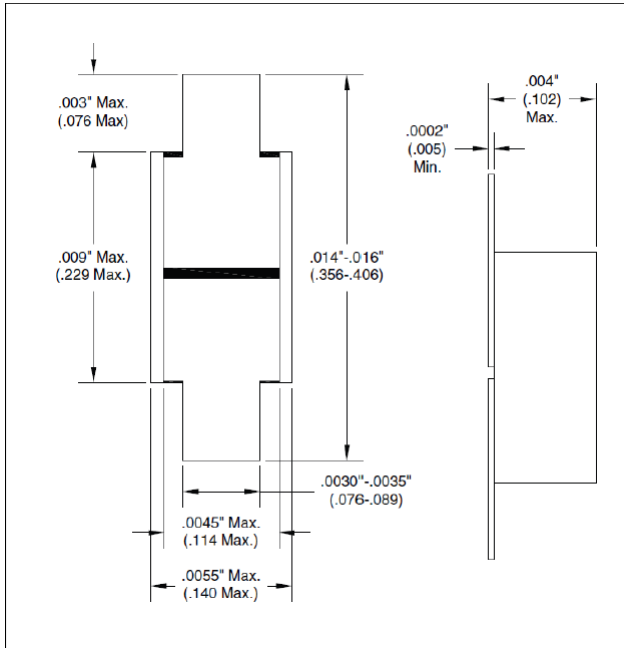


## Beam Lead Capacitors

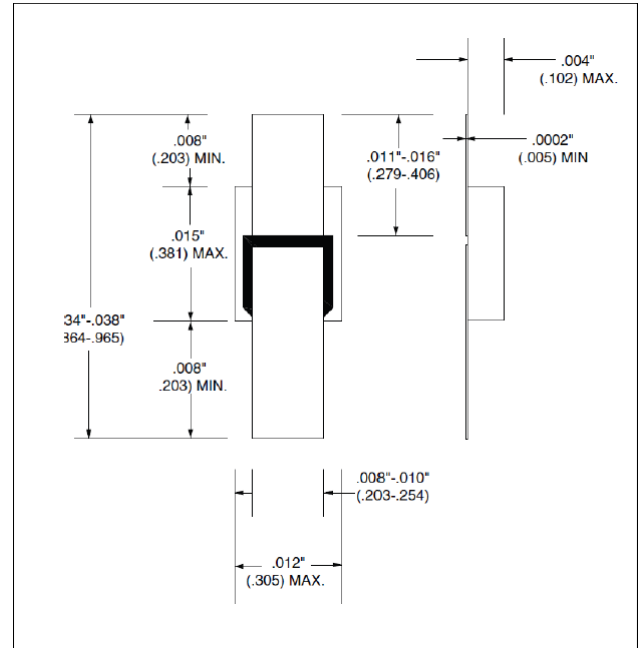
Rev. V1

### Outline Drawings

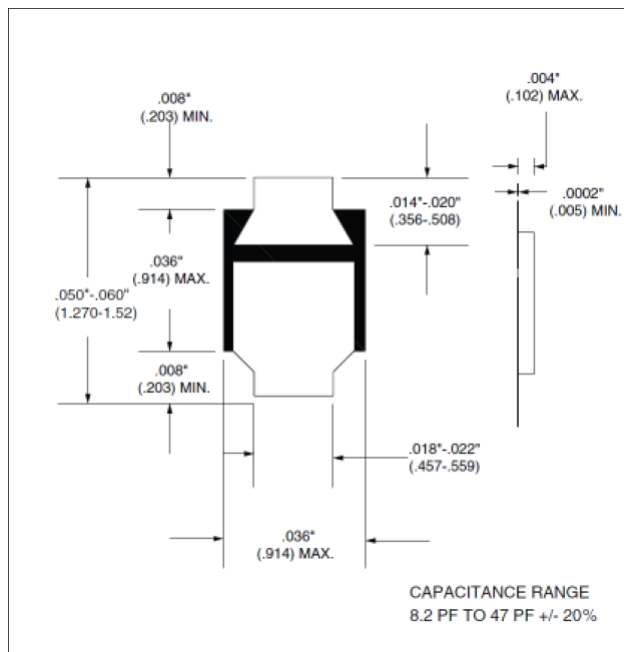
**CS14-1**



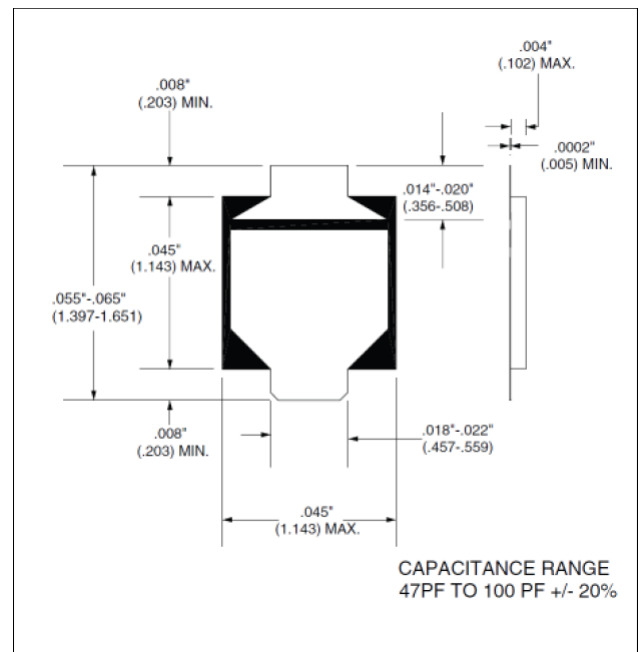
**CS14-2**



**CS14-1**



**CS14-2**



M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.