

July 8th, 2016

Digi-Key Corporation 701 Brooks Ave South Thief River Falls, Minnesota 56701

ATTN: Quality/Purchasing Manager

## Subject: Lead-Free (RoHS 6of6) conversion

## PCN-00893

Dear Valued Customer:

Please accept this PCN letter as formal notification for the change of M/A-COM Technology Solutions part number(s) shown below.

The device(s) listed on this page are the affected device(s).

According to our records, one or more of these devices has been purchased by your company within the past twenty-four (24) months.

# M/A-COM Part Number(s):

MACP-009011-C80370 MABA-009180-500MHz

Technical details of this change notice follow on the next page(s).

Please contact me if you have any questions.

Sincerely,

#### Alan Miller

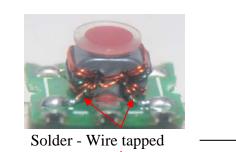
Product Line Manager (CATV) M/A-COM Technology Solutions Cell: +978-427-7482

Email: alan.miller@macom.com

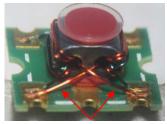


PCN Number: 00893		PCN Date:	July 8th, 2016
Title: Lead-free conv	ersion of MACOM part numbers	listed.	
Change is to convert t	o RoHS compliant.		
	: Wire attach from HMP solder to Z: HMP solder to SAC-305 solde	•	al Wires untapped.
WABA-009160-500WIN2		r on noating tap.	
Proposed 1st Ship Date:		Estimated Sample Availability:	
October 8th, 2016		50 samples of each available	
		immediately if required.	
Change Type:			
Assembly Site	Design	Electrical Specification	
Test Site	Assembly Process X	Mechanical Specification	
Test Process	Assembly Materials X	Packing/Shipping/Labeling	
PCN Details			
Description of Char	nge:		
MACP-009011-C80370			

These parts currently use HMP solder on the wire connections. In order to make these parts fully RoHS compliant and Pb-free the HMP will be replaced with weld connections. The central wires will be untapped for assembly optimization purposes. The transformers will have the same fit and function with a slight modification to form.

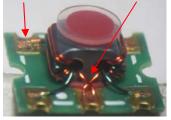






# Weld - Wire untapped

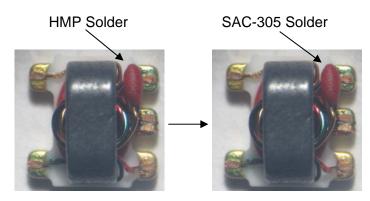
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#### MABA-009180-500MHz

These parts currently use HMP solder on the floating tap wire connection. In order to make these parts fully RoHS compliant and Pb-free the HMP will be replaced with SAC-305 solder. The transformers will have the same form, fit and function.



## **Reason for Change:**

To comply with market request for product to be RoHS compliant and lead-free.

#### **Products Affected:**

MACP-009011-C80370 MABA-009180-500MHz

Anticipated impact on Fit, Form, Function:

Slight modification on Form for MACP-009011-C80370 None for MABA-009180-500MHz

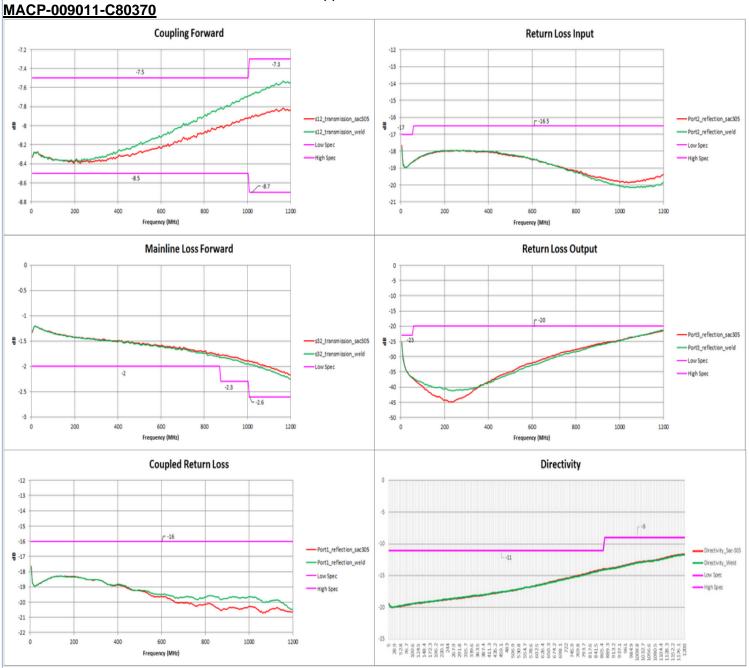
## Changes to product identification resulting from this PCN:

#### None

Qualification: Test Results Comparative test results – Product assembled with HMP solder and SAC305 solder in the wire-tap connection. See Appendix I: MABA-007488-CT9550 Test Data. See Appendix II: MABA-009180-500MHz Test Data.

M/A-COM Technology Solutions, Inc. 4 East Gate Road, Little Island, Co. Cork, Ireland. www.macomtech.com





Appendix I

M/A-COM Technology Solutions, Inc. 4 East Gate Road, Little Island, Co. Cork, Ireland. www.macomtech.com

MABA-009180-500MHz



#### insertion\_loss\_1\_p5\_1 insertion\_loss\_2\_p5\_3 0 0 -0.5 -0.5 -1 -1 -1 -1 -1.5 -1.5 insertion\_loss\_1\_p5\_1\_SAC305 insertion\_loss\_2\_p5\_3\_SAC305 8 8 insertion\_loss\_1\_p5\_1\_HMP insertion\_loss\_2\_p5\_3\_HMP -2 -2 L.2 -Low Spec -2 -Low Spec -2.5 -High Spec -2.5 High Spec -3 -3 L.3 -3 -3.5 -3.5 0 50 100 150 200 250 300 350 400 450 500 ò 50 100 150 200 250 300 350 400 450 500 Frequency (MHz) Frequency (MHz) amplitude\_balance phase\_balance 1 6 - 5 5 0.8 -0.6 4 0.6 0.6 0.4 - 2 2 0.2 0.1 phase\_balance\_SAC305 amplitude\_balance\_SAC305 **9** 0 **\$** 0 -phase balance HMP -0.2 -0.1 -Low Spec -Low Spec -2 -0.4 -High Spec -High Spec -0.6 0.6 -4 -0.6 -0.8 -5 -1 •6 0 50 100 150 200 250 300 0 50 100 150 200 250 300 Frequency (MHz) Frequency (MHz) input\_return\_loss\_p5 0 -5 -10 -15 8 input\_return\_loss\_p5\_SAC305 -20 - input\_return\_loss\_p5\_HMP -25 -30 -35 50 200 250 300 350 400 450 500 0 100 150 Frequency (MHz)

Appendix II

IRL has no DS spec.