



DM-M13-018

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Date: 13 May 2013

Messr.PK COMPONENTS ELEKT.BAUELEM. VERTR. GMBH

Sensor Products Department 2

Sensor Product Division

Murata Manufacturing Co.,Ltd.

Approved by: K. Hashimoto  
K.hashimotoIssued by: Yoshihiro Yoshida  
Y.Yoshida

Application for Material Change for  
Magnetic Pattern Recognition sensor

We are planning material change for our sensor as below.

Please confirm the contents and return a second form filled with your answer.

Product Name	Magnetic Pattern Recognition Sensor	Murata P/N	BS05T1HGNA
		Customer P/N	BS05T1HGNA
Reason	It is confirmed that similar products which are the same in structure as BS05T1HGNA tend to have carrier noise. Namely, BS05T1HGNA may have carrier noise as well. The causes were 1) the propagation of impact vibration to sensor elements, and 2) the vibration of the magnetic metal cover. To avoid carrier noise, the following modifications will be made.		
Contents		Risks	
	1) -1 Change in shape of holder The sides of each MR-element are not in contact with adjacent MR-element or the case.  1)-2 Change in adhesive resin.  2) Change in hardness grade of cover material:SUS304. From 3/4H to 1/2H.	1) No possible effect on the characteristics.  2) 1.1 to 1.2 times abrasion loss comparing to SUS304-3/4H. Abrasion resistance will decline.  See the attached pdf document.	
These material changes "1), 2)" will be made after running out of our current material stock. Moreover, the both changes may not be made at the same time.  We would greatly appreciate your understanding in this matter.			



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Response Form

Date

To Sensor Products Department 2  
Sensor Product Division  
Murata Manufacturing Co.,Ltd.

Company Name:

Accepted by

Subject	Material Change for Magnetic Pattern Recognition sensor against the carrier noise problem.		
Answer	<input type="checkbox"/> Approve	<input type="checkbox"/> Approve with conditions	<input type="checkbox"/> Disapprove
Remarks	<div></div> <div></div> <div></div>		

Please return this completed form by 31<sup>st</sup> May, 2013.