

To: Dear customer

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Subject : RoHS Compliant Product Change Prior notice for MITSUBISHI Silicon RF Power devices.

We have plans to change the material that the Silver resin paste from the PbSnAg solder paste for the purpose of RoHS2 adaption for MITSUBISHI Silicon RF RD series SLP package discrete devices.

The reason of change is due to these applications, high-melting solder alloys are used, which is exception item at RoHS, and do not satisfy the requirements of RoHS2.

Also, We change the production site to THAILAND(EMS company) from JAPAN, change to the EMS company standard material for Leadframe material, and SLP package size is thinned to a thickness of EMS company standard size. We will report for the RF characteristics result, reliability test result to customer.

Products subject, Reason of change, Change schedule

Subject	Product name		Type number	
	MOS FET RF Power device.		RD series discrete devices of SLP package Page2 shows the type number list.	
Reason of change	Reason of change	Requirements of RoHS2.		
	Changed contents	Change of the material, product site and package thickness.		
	Current	New		
	Die attach: PbSnAg Solder Leadframe plating: Silver Production site : JAPAN COOL : Made in JAPAN Package thickness: 0.9mm ± 0.1mm Page3 shows the change contents.	Die attach: Silver resin paste Leadframe plating: PPF Production site : THAILAND(EMS company) COOL : Made in THAILAND Package thickness: 0.75mm ± 0.05mm		

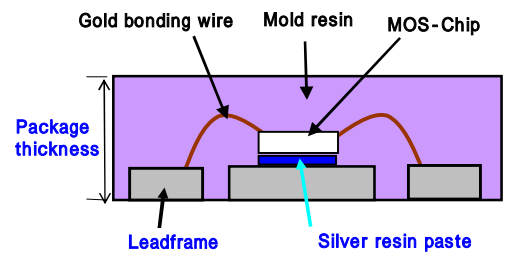


Figure: Cross-sectional view of SLP package

	'2013												'2014				
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
STEP1 : Change for RD07MUS2B																	
We will report for RF characteristics, reliability test, and send product change notice.				↔													
Start of provide samples.				↔ CS													
Mass production start for assembly start from July 2013 at EMS company. But test location and shipping location is Japan.																	
Mass production start for test from Apr 2014 at EMS company.																	
End of life for the PbSnAg solder product by Aug 2013.																	
STEP2 : Change for other SLP except of RD07MUS2B																	
We will report for RF characteristics, reliability test, and send product change notice.																	
Start of provide samples.																	
Mass production start for assembly start from Oct 2013 at EMS company. But test location and shipping location is in Japan.																	
Mass production start for test from Apr 2014 at EMS company.																	
End of life for the PbSnAg solder product by Mar 2014.																	

Type number list

Change product standard number in palette specifications from 1** to 2**.

Change product standard number in taping reel specifications from T1** to T2**.

	Type number	current specification of PbSnAg solder	New specification of Silver resin paste
RD series SLP package devices	RD07MUS2B	RD07MUS2B-1**	RD07MUS2B-2**
		RD07MUS2B-T1**	RD07MUS2B-T2**
	RD02MUS1	RD02MUS1-1**	RD02MUS1-2**
		RD02MUS1-T1**	RD02MUS1-T2**
	RD02MUS1B	RD02MUS1B-1**	RD02MUS1B-2**
		RD02MUS1B-T1**	RD02MUS1B-T2**
	RD04HMS2	RD04HMS2-1**	RD04HMS2-2**
		RD04HMS2-T1**	RD04HMS2-T2**
	RD07MVS1	RD07MVS1-1**	RD07MVS1-2**
		RD07MVS1-T1**	RD07MVS1-T2**
	RD07MVS1A	RD07MVS1A-1**	RD07MVS1A-2**
		RD07MVS1A-T1**	RD07MVS1A-T2**
	RD07MVS1B	RD07MVS1B-1**	RD07MVS1B-2**
		RD07MVS1B-T1**	RD07MVS1B-T2**
	RD07MVS2	RD07MVS2-1**	RD07MVS2-2**
		RD07MVS2-T1**	RD07MVS2-T2**
	RD12MVS1	RD12MVS1-1**	RD12MVS1-2**
		RD12MVS1-T1**	RD12MVS1-T2**

Change contents

		Current	New
Die attach	Material	PbSnAg solder	Silver(Ag) resin paste
leadframe	Base material	Copper-EFTEC	No change
	plating	Silver(Ag)	PPF (Palladium Pre Plated Lead Frame)
Wire	Material	Gold(Au)	No change
	Diameter	30 μ m	No change
Mold resin	Material	epoxy resin	No change
Package size	Depth	4.9mm \pm 0.15mm	No change
	Width	6.0mm \pm 0.15mm	No change
	Thickness	0.9mm \pm 0.1mm	0.75mm \pm 0.05mm
Production site		JAPAN	THAILAND(EMS company)
Country Of Origin Labeling (COOL)		Made in JAPAN	Made in THAILAND

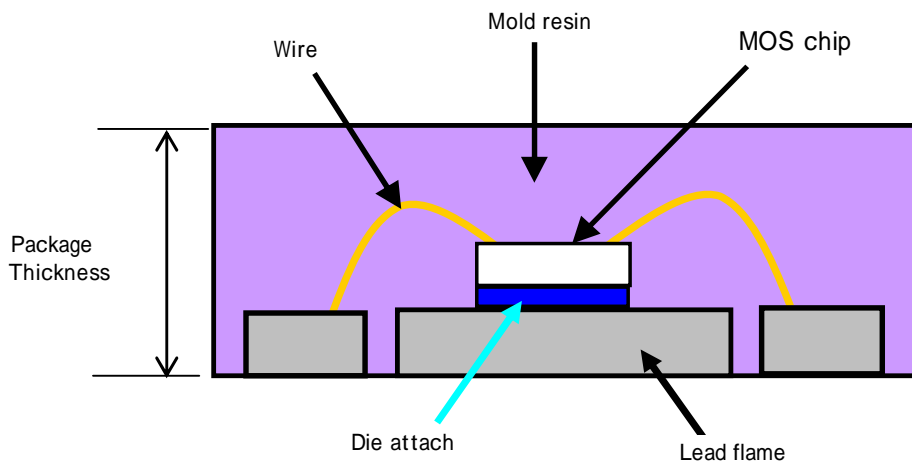


Figure:Cross-sectional view of SLP package