



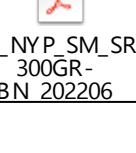


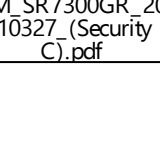
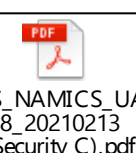
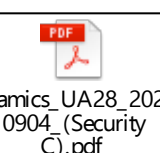
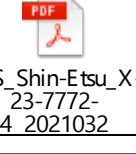





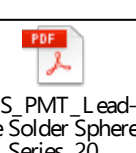
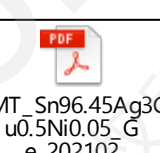


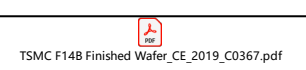

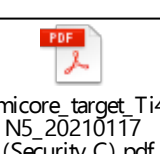




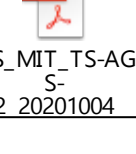
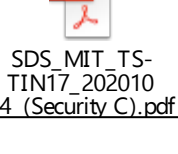
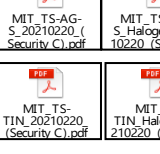
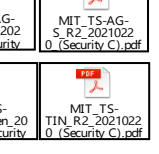
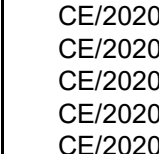
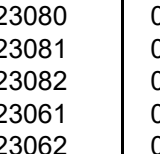
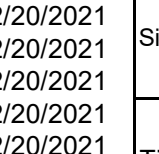
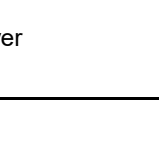
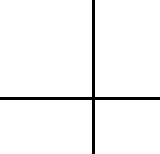
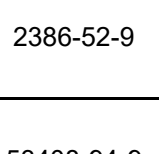
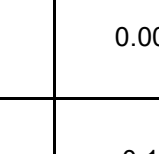
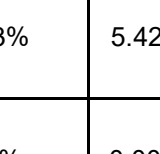
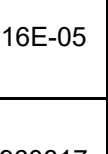


X3 RoHS Report

编号 No.	日期 Date	版本 Version	作者 Author	变更说明 Description of Change
1	2020/5/20	1.0	Vivian Xu	Initial
2	2020/9/30	2.0	Ning Wang	Update RoHS Report

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Package : HFC FBGA 15X15
Device : X3ME001BGTEA
Date : 2020/9/30

MATERIAL (Description)				SUBSTANCE (Ingredient/s In Material)					
Material Name	Tradename	MSDS	SGS	SGS Report No.	Due date of SGS Report	Substance Name	CAS Number	Substance Weight Amount (%)	Substance Weight Amount (grams)
Substrate	Substrate Thickness=1.156mm, 8 layers, Substrate Material Type = Green Substrate Core =Hitachi CCL-E700GR Soldermask = Hitachi SR7300GR-B ABF = Ajinomoto GX92			CE/2020/82194 CE/2020/11802 CE/2020/11803 CE/2020/11808 CE/2020/34804	08/21/2021 01/14/2021 01/14/2021 01/14/2021 03/27/2021	Copper	7440-50-8	9.89%	0.17404920
						Solder Mask	7727-43-7/ 60676-86-0/ 64742-94-5/ 112-15-2/ 103429-90-9/ 108-94-1/ Trade secret	0.89%	0.01563750
						Core	7440-50-8/ 65997-17-3/ 60676-86-0/ Trade secret	20.96%	0.36900000
						ABF	7631-86-9/ 25068-38-6/ 9003-36-5/ 64742-94-5/ 108-94-1/ 108-88-3/ 78-93-3/ 91-20-3/ 25551-13-7/ Trade secret	3.45%	0.06075000
						Plugging	25068-38-6/ 9003-36-5/ 110656-67-2/ 471-34-1	1.31%	0.02301494
						SOP	7440-31-5/ 7440-22-4/ 7440-50-8/ Trade secret	0.13%	0.00236822
						Tin Plating	7440-31-5	0.02%	0.00035181
Underfill	UA28			CE/2020/84830	09/04/2021	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	0.01%	0.00021000
						Bisphenol F type liquid epoxy resin	9003-36-5	0.08%	0.00140000
						Amine type hardener	trade secret	0.03%	0.00052500
						Carbon black	1333-86-4	0.01%	0.00010500
						Silicon dioxide	60676-86-0	0.26%	0.00455000
						Additives	trade secret	0.01%	0.00021000
TIM	X23-7772-4			CE/2019/A0325	10/14/2020	Silicone	trade secret	0.11%	0.00190000
						Additives (small amount of ingredients)	trade secret	0.01%	0.00010000
						Zinc oxide	1314-13-2	0.23%	0.00400000
						Aluminum	7429-90-5	0.80%	0.01400000
Adhesive	SE4450			CE/2020/21792	02/13/2021	Methyltrimethoxysilane treated aluminum oxide	trade secret	1.69%	0.02975000
						Dimethyl Siloxane, Dimethylvinylsilox-terminated	68083-19-2	0.30%	0.00525000
Heat spreader	Heat spreader			CE/2020/82879	08/26/2021	Copper(Cu)	7440-50-8	46.01%	0.81000000
						Nickel(Ni)	7440-02-0	5.11%	0.09000000
Solder ball	SAC305/ 0.35mm			KA/2020/21237	02/24/2021	Tin	7440-31-5	4.41%	0.07764225
						Silver	7440-22-4	0.14%	0.00241500
						Copper	7440-50-8	0.02%	0.00040250
						Nickel	7440-02-0	0.00%	0.00004025
Repassivation polyimide	HD4100			CE/2019/C0184	12/09/2020	N-Methyl-2-Pyrrolidone.	872-50-4	0.01%	0.000171007
						Polyamic Acid Ester	67-56-1	0.01%	0.000126305
						Nonregulated ingredients	109-17-1	0.00%	2.70011E-06
Die	Silicon			CE/2019/C0367	12/26/2019	Aluminum	7429-90-5	0.00381%	0.00006710
						Copper	7440-50-8	0.01143%	0.00020130
						Silicon and its compounds	7440-21-3	3.79433%	0.06679993
						Tantalum	7440-25-7	0.00152%	0.00002684
						Titanium	7440-32-6	0.00008%	0.00000134
						Tungsten	7440-33-7	0.00015%	0.00000268
						Cobalt	7440-48-4	0.00004%	0.00000067
UBM metalization Ti	Titanium Ti			CE/2020/13008	01/17/2021	Titanium Ti	7440-32-6	0.00%	1.75277E-05
UBM metalization Ni	Ni			CE/2020/70861	07/10/2021	Ni	13770-89-3	0.06%	0.001028547
UBM metalization Cu	Copper Cu			CE/2020/13007	01/17/2021	Copper Cu	7440-50-8	0.08%	0.001387544
Solder Ball	SnAg1.8		            	CE/2020/23080 CE/2020/23081 CE/2020/23082 CE/2020/23061 CE/2020/23062 CE/2020/23063	02/20/2021 02/20/2021 02/20/2021 02/20/2021 02/20/2021 02/20/2021	Silver	2386-52-9	0.003%	5.42716E-05
						Tin	53408-94-9	0.17%	0.002960817
Total								100.00%	1.76052040

** where ND = Not Detectable

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