

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STM32F301K8U7 STM32F301K8U7TR	SAMG*439XXXZ	A	998Z	25-10-2017
	Amount	UoM	Unit type	ST ECOPACK Grade
	49.60	mg	Each	ECOPACK® 2
	Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable; if coating is used or other bulk termination	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	5X5X0.55	32	No lead	
Comment	Package : A0B8 UFQFPN 5X5X0.55 32L 0.5 MM PITCH 8202208			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	FALSE
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description

QueryList : REACH-12th January 2017				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	SAMG*439XXXZ				6000000.0	1000000.0
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or dies	M-011 Other inorganic materials	4.260	mg	supplier	die	Silicon (Si)	7440-21-3		3.844	mg	902347	77495
				supplier	metallization	Aluminium (Al)	7429-90-5		0.028	mg	6573	564
				supplier	metallization	Copper (Cu)	7440-50-8		0.141	mg	33099	2843
				supplier	metallization	Cobalt (Co)	7440-48-4		0.026	mg	6103	524
				supplier	metallization	Titanium (Ti)	7440-32-6		0.008	mg	1878	161
				supplier	metallization	Tungsten (W)	7440-33-7		0.015	mg	3521	302
				supplier	Passivation	Silicon Nitride	12033-89-5		0.019	mg	4460	383
				supplier	Passivation	Silicon Oxide	7631-86-9		0.179	mg	42019	3609
				Supplier	Metals	Silver	7440-22-4		0.736	mg	704535	14840
				Die Attach Epoxy _ABLEBOND 8290_H	M-011 Other inorganic materials	1.045	mg	Supplier	Plastics/polymers	Bisphenol-F, epoxy resin	9003-36-5	
Supplier	Polymers	Fatty acids, polymers with epichlorohydrin	68475-94-5						0.051	mg	48437	1020
Supplier	Organic Compounds	Gamma Butyrolactone	96-48-0						0.051	mg	48437	1020
Supplier	Epoxy Resin	Epoxy Resin	Proprietary						0.051	mg	48437	1020
Supplier	Amines	Poly(Oxy(methyl-1, 2-ethanediyl)	9046-10-0						0.051	mg	48437	1020
Supplier	Metallic compounds	Copper Oxide	1317-38-0						0.051	mg	48437	1020
Supplier	Organic Compounds	1,4-Bis(2,3-epoxypropoxy) butane	2425-79-8						0.005	mg	4844	102
Mold Compound_EME-G770_Sumitor	M-011 Other inorganic materials	15.615	mg					Supplier	Plastics/polymers	Epoxy Resin A	Proprietary	
				Supplier	Plastics/polymers	Epoxy Resin B	Proprietary		0.318	mg	19837	6411
				Supplier	Plastics/polymers	Phenol Resin A	Proprietary		0.318	mg	19837	6411
				Supplier	Plastics/polymers	Phenol Resin B	Proprietary		0.318	mg	19837	6411
				Supplier	Glass	Silica (Amorphous) A	60676-86-0		11.326	mg	732452	228335
				Supplier	Glass	Silica (Amorphous) B	7631-86-9		2.609	mg	162767	52605
				Supplier	Metallic compounds	Metal Hydroxide	Proprietary		0.318	mg	19837	6411
				Supplier	Additives	Carbon Black	1333-86-4		0.090	mg	5595	1808
Bonding wire_WIRE Ag SI TYPE_MKE	Bonding Wire	0.105	mg	Supplier	Metals	Silver	7440-22-4		0.101	mg	960000	2037
				Supplier	Metals	Others	Proprietary		0.004	mg	40000	85
Anode Ball_Pure Tin_Nuonengda	M-011 Other inorganic materials	1.578	mg	Supplier	Metals	Tin	7440-31-5		1.578	mg	1000000	31808
Lead frame_C7+Ag_MITSUI	Copper & its alloys	27.000	mg	Supplier	Metals	Copper	7440-50-8		25.607	mg	948400	516233
				Supplier	Metals	Nickel	7440-02-0		0.799	mg	29600	16112
				Supplier	Glass	Silicon	7440-21-3		0.173	mg	6400	3484
				Supplier	Metals	Magnesium	7439-95-4		0.041	mg	1500	816
				Supplier	Metals	Silver	7440-22-4		0.381	mg	14100	7675