Environmental Management and Materials Information

Product Content Information for: DS2119ME+T&amp/R

Links

- Qualifications
- Package Description
- Chemical Composition Summary
- Detailed Package Component Data
- Other Component Data

Qualifications Top

Lead-Free Qualified	No
REACH	Under Assessment
RoHS Qualified	No
Green	No
Moisture Sensitivity Level	Not Available - Contact Us
Flammability Meets UL-94 (V-0 Rating)	No

Package Description Top

Package Code	
Package Type	
Package Option	
Footprint Area (mm^2)	
Pin Count	
Unit Weight in Grams	

Chemical Composition Summary Top

Maxim NIA/NIU Substance List (PDF, 24k)

Substance	CAS Number	Amount (grams)	% of Unit Weight
Aluminum (Al)	7429-90-5		
Antimony (Sb_2O_3)	1309-64-4		

BCB Resin	
Bromine (Br)	7726-95-6
Carbon (C)	7440-44-0
Carbon Black	1333-86-4
Ceramic ($BaTiO_3$)	12047-27-7
Chromium (Cr)	7440-47-3
Cobalt (Co)	7440-48-4
Copper (Cu)	7440-50-8
Gold (Au)	7440-57-5
Indium (In)	7440-74-6
Insulator (Polyimide)	
Insulator Film	
Iron (Fe)	7439-89-6
FeO_2	12411-15-36
Lead (Pb)	7439-92-1
Magnesium (Mg)	7439-95-4
Manganese (Mn)	7439-96-5
MnO_3	
Nickel (Ni)	7440-02-0
NiPdAu	
Nickel-V (NiV)	
Palladium (Pd)	7440-05-3
Phosphorus (P)	7723-14-0
Silica (SiO_2)	11126-22-0
Silicon (Si)	7440-21-3
Silver (Ag)	7440-22-4
Solder Mask	
Solder Paste	
Spheron Polymer Passivation	
Sulfur (S)	7704-34-9
Tin (Sn)	7440-31-5
Titanium (Ti)	7440-32-6
Titanium-W (TiW)	
Tungsten (W)	7440-33-7
Vanadium (V)	7440-62-2
Zinc (Zn)	7440-66-6
ZnO	1314-13-2

Zirconium (Zr)	7440-67-7

Detailed Package Component Data Top

Backside Laminate

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Epoxy/Acrylic Resin			

Base/Lid Components

Summary
Base Material
Lid/Cap Material
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Base Weight			
Lid Weight			

Bond Wire Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Gold (Au)			
Aluminum (Al)			

Bump Components

Summary
Bump Assembler
Bump Material
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Lead (Pb)			
Tin (Sn)			
Copper (Cu)			

Insulator (Polyimide)			
Silver (Ag)			
UBM (Ti)			
RDL (Cu)			
Nickel (Ni)			

Copper Post

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Copper			

Die Attach Epoxy Components

Summary
Die Attach Material
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Aromatic Amine			
Copper (Cu)			
Diester			
Epoxy			
Functionalized Ester			
Functionalized Urethane			
Indium (In)			
Lactone			
Lead (Pb)			
Polymeric			
Polyoxypropylenediamine			
Resin			
Silver Filler (Ag)			
Tin (Sn)			
Other			

Die Coat Components

Summary

Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
BCB Resin			

Heat Slug Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Heat Slug			
Epoxy			
Copper (Cu)			
Other			

Laminate Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Copper (Cu)			
Gold (Au)			
Nickel (Ni)			
Solder Mask			

Lead Finish/Plating Components

Summary
Lead Finish Plating
Assembly Lead Finish Process
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Lead (Pb)			
Tin (Sn)			
NiPdAu			
Gold (Au)			
Nickel (Ni)			

Lead Frame Components

Summary
Lead Frame Material
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Aluminum (Al)			
Carbon (C)			
Chromium (Cr)			
Cobalt (Co)			
Copper (Cu)			
Gold (Au)			
Iron (Fe)			
Lead (Pb)			
Magnesium (Mg)			
Manganese (Mn)			
Nickel (Ni)			
Palladium (Pd)			
Phosphorus (P)			
Silicon (Si)			
Silver (Ag)			
Sulfur (S)			
Tin (Sn)			
Zinc (Zn)			
Zirconium (Zr)			

Maxfilm

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Maxfilm			

Mold Compound Components

Summary
Mold Material
Resin Type

Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Antimony (Sb_2O_3)			
Bromine (Br)			
Carbon Black			
Epoxy			
Epoxy Cresol Novolac			
Metal Hydroxide			
Phenol Novolac			
Silica (SiO_2)			
Resin			
Other			

Silicon Chip Components

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Silicon Chip		100	

Spheron Polymer Passivation Components

Summary

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Spheron Polymer Passivation		100	

Insulator Film Components

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Insulator Film			

Solder Ball Components

Summary

Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Copper (Cu)			
Lead (Pb)			
Nickel (Ni)			

Silver (Ag)			
Tin (Sn)			

Solder Paste Components

Summary	
Component Weight	

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Antimony (Sb_2O_3)			
Copper (Cu)			
Indium (In)			
Lead (Pb)			
Silver (Ag)			
Tin (Sn)			

Substrate Components

Summary	
Substrate Weight	
Substrate Material	
Substrate Core Material	
Bromine-Free	

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Copper			
Gold			
Nickel			
Substrate Core Material			
Solder Mask			
Triazol			
Other			

UBM Components

Summary	
Component Weight	

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Chromium (Cr)			
Copper (Cu)			

Nickel (Ni)

Nickel-V (NiV)

Titanium (Ti)

Titanium-W (TiW)

Tungsten (W)

Vanadium (V)

Other Component Data Top

Passive Component 1

Summary

Material Type / PN Codes

Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Passive Component 1			

Passive Component 2

Summary

Material Type / PN Codes

Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Passive Component 2			

Passive Component 3

Summary

Material Type / PN Codes

Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Passive Component 3			

Passive Component 4

Summary

Material Type / PN Codes

Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight

Passive Component 4

Capacitor Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Ceramic ($BaTiO_3$)			
Copper (Electrode)			

Crystal Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Silver (Ag)			
Aluminum (Al)			
Gold (Au)			
Chromium (Cr)			
Lead (Pb)			
Manganese (Mn)			
Nickel (Ni)			
Cobalt (Co)			
Copper (Cu)			
Iron (Fe)			
Silicon (Si)			
Tin (Sn)			
Zinc (Zn)			
Silica (SiO_2)			

Diode Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Encapsulant (Phenolic Resin)			
Gold Wire			
Leadframe (Copper 194)			

Pellet (Chip)			
Terminal (SnAgCu)			

Optocoupler Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Die (Chip)			
Encapsulant (Phenolic Resin)			
Epoxy (Ag)			
Gold Wire			
Leadframe (Alloy 42)			
Potting Resin (Silicone)			
Terminal Plating (Sn)			

Resistor Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Component Weight			

Transformer Components

Summary
Component Weight

Substance	Amount (grams)	% of Component Weight	% of Unit Weight
Copper			
FeO_2			
MnO_3			
ZnO			

Notes:

1. Lead Form: GW - Gull Wing, TH - Through Hole.
2. Refer to product data sheet to confirm actual wire diameter.
3. 'ND' means None Detected, negligible amount present.

This part is qualified as lead-free.

Parts qualified as lead-free can be manufactured and supplied as lead-free, if and only if, the customer makes such requests to the Maxim Business Units for approval. The navigation bar on the EMMI website contains information regarding the lead-free process (e.g. MSL's, Peak reflow Temperatures, JEDEC methods, frequently asked questions and answers, lead-free package tables, and status/qualification plans for particular package types qualified as lead-free or in the qualification process).

This report was generated on 2024-09-09. For additional information, please visit the Maxim/Dallas Environmental Management and Materials Information website located at:

https://www.maximintegrated.com/en/emmi