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Cypress Semiconductor Indirect Material Qualification Report

QTP# 161102 VERSION **
March 2016

Qualification of Hwa Shu Tray
54-Leads TSOP II Products
ASEK-Taiwan (G)

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INDIRECT MATERIAL QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date
161102	Qualification of Hwa Shu Tray for 54-Leads TSOP II at ASEK-Taiwan (G)	Mar 2016

MAJOR MATERIAL INFORMATION USED IN THIS QUALIFICATION	
MATERIAL IDENTIFICATION	
Material Designation:	TZW54B
Carrier Tape Part No:	Not Applicable
Surface Resistivity:	$10^5 - 10^{11}$ ohm/sq.
Material Name:	TSOPII 54L Shipping Tray (Hwa Shu)
Chemical Name:	Modified Poly-phenylene Ether, Polystyrene, Carbon Black
Content:	Modified Poly-phenylene Ether: 60~70%, Polystyrene: 10~20%, Carbon Black: 1~15%
CAS no.:	Modified Poly-phenylene Ether: 25134-01-4 Polystyrene: 9003-53-6, Carbon Black: 1333-86-4
Impurities contributing to Hazards:	None
PHYSICAL DATA	
Appearance:	Black in color
Melting point	250 °C
Solubility in water	Not soluble in water
Specific Gravity:	1.12
STABILITY AND REACTIVITY	
Stability: Stable	Yes
Incompatible Material to avoid	None
Hazardous Decomposition	None
Hazardous Polymerization	Will not polymerize
Hazardous decomposition	None
TOXICOLOGICAL INFORMATION	
Acute toxicity	N/A
Eye damage/irritation	Low hazard for usual industrial handling
Skin corrosion/irritation	Molten material will cause thermal burns
ECOLOGICAL INFORMATION	
General	This material is not expected to be harmful to the ecology

MAJOR MATERIAL INFORMATION USED IN THIS QUALIFICATION	
HAZARD IDENTIFICATION	
Most Important Hazards:	None
Adverse Human Health Effects	If fumes or smoke are inhaled, remove personnel for fresh air. If breathing would be difficult.
Environmental Effects	None
Physical and Chemical Hazards	Combustion
FIRST AID MEASURES	
Inhalation	Pallet form, not expected to be inhaled
Skin Contact	Safe for contact with skin
Eye Contact	Wear safety goggle when processing this material
Ingestion	Sent to hospital immediately
FIRE-FIGHTING MEASURES	
Extinguishing Media	Water, foam, etc, general media for firefighting
Special Fire-Fighting Procedure	Use self-contained breathing apparatus
Fire and Explosion Hazards	Non-explosive, burning tendency follow UL rating
ACCIDENTAL RELEASE MEASURES	
Methods for cleaning UPS	Can be recovered by hand without danger
Waste disposal Method	Can be recycled and reused
HANDLING AND STORAGE	
Safe Handling advice	Avoid exposure to high temperature and flame
EXPOSURE CONTROLS / PERSONAL PROTECTION	
Threshold limit value	None
Most important Hazard	None
Health Hazard	None
Effect of overexposure	Safe for contact with skin, no danger to overexposure
DISPOSAL CONSIDERATIONS	
Discard the treatment method	Consult relevant regulations to deal with

PROCESS ENGINEERING QUALIFICATION PERFORMED PER SPECIFICATION REQUIREMENTS

Test	Test Condition (Reference Specifications)	Result P/F
CADFIT Analysis	Pass POD & End flash Criteria	P
Dimensional Measurement	POD Drawing-JESD22-B100B	P
Substance Check	European Union RoHS 2002/95/E REACH XVII	P
Surface Resistivity Measurement	Conductive Packing/shipping material: $10^5 \Omega/\text{sq}$ Static dissipative Packing/shipping material: $10^5\text{-}10^{12} \Omega/\text{sq}$	P
Functionality Test	Pass Manufacturability	P
Drop Test	Non-Dry Packed Material: No tears & punctures Boxes: No Complete structural damage, No progressive crumpling/deformed, no tears & punctures.	P



Reliability Test Data

QTP #: 161102

<i>Device</i>	<i>Material</i>	<i>Part #</i>	<i>Package</i>	<i>Finish Site</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: CADFIT ANALYSIS								
N/A	HWA SHU TRAY	4600613111	TSOP 54	ASEK-G	COMP	1	0	
STRESS: SUBSTANCE CHECK								
N/A	HWA SHU TRAY	4600613111	TSOP 54	ASEK-G	COMP	1	0	
STRESS: DIMENSIONAL MESAUREMENT								
N/A	HWA SHU TRAY	4600613111	TSOP 54	ASEK-G	COMP	10	0	
STRESS: SURFACE RESISTIVITY MEASUREMENT								
N/A	HWA SHU TRAY	4600613111	TSOP 54	ASEK-G	COMP	10	0	
STRESS: FUNCTION TEST								
N/A	HWA SHU TRAY	4600613111	TSOP 54	ASEK-G	COMP	10	0	
STRESS: DROP TEST								
N/A	HWA SHU TRAY	4600613111	TSOP 54	ASEK-G	COMP	31	0	
STRESS: WARP TEST								
N/A	HWA SHU TRAY	4600613111	TSOP 54	ASEK-G	COMP	10	0	



Document History Page

Document Title: QTP#161102: Qualification of Hwa Shu Tray for 54-Leads TSOP II Products, ASEK-Taiwan (G)
Document Number: 002-11917

Rev.	ECN No.	Orig. of Change	Description of Change
**	5183013	HSTO	Initial Spec Release