



Integrated Device Technology, Inc.  
2975 Stender Way, Santa Clara, CA - 95054

### PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **G-0110-06 REV.1** DATE: 12/14/2001  
Product Affected: All applicable plastic package  
(except BGA) families  
Date Effective: 3/15/2002

MEANS OF DISTINGUISHING CHANGED DEVICES:  
 Product Mark  
 Back Mark  
 Date Code  
 Other Alpha suffix "F" in assembly lot number

Contact: Geoffrey Cortes  
Title: Manager, Corporate Quality & Reliability  
Phone #: (408) 492-8321  
Fax #: (408) 727-2328  
E-mail: [Geoffrey.Cortes@idt.com](mailto:Geoffrey.Cortes@idt.com)

Attachment:  Yes  No  
Sumitomo material datasheet  
Samples: Contact the local IDT sales representative

#### DESCRIPTION AND PURPOSE OF CHANGE:

- Die Technology
  - Wafer Fabrication Process
  - Assembly Process
  - Equipment
  - Material
  - Testing
  - Manufacturing Site
  - Data Sheet
  - Other
- IDT will be qualifying the new EME-7351LP and EME-S351LP mold compound materials from Sumitomo. Once qualified, IDT will add these mold compound materials as qualified materials for all applicable plastic package (except BGA) families.
- REV.1 This PCN is revised to include all applicable plastic package (except BGA) families

#### RELIABILITY/QUALIFICATION SUMMARY:

Qualification testing will verify that there is no change to the product reliability. Qualification data is available upon request.

#### CUSTOMER ACKNOWLEDGMENT OF RECEIPT:

IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.

*IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.*

Customer: \_\_\_\_\_  
Name/Date: \_\_\_\_\_  
Title: \_\_\_\_\_

**Approval for shipments prior to effective date.**  
E-Mail Address: \_\_\_\_\_  
Phone# /Fax# : \_\_\_\_\_

CUSTOMER COMMENTS: \_\_\_\_\_

#### IDT ACKNOWLEDGMENT OF RECEIPT:

RECD. BY: \_\_\_\_\_ DATE: \_\_\_\_\_



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## PRODUCT/PROCESS CHANGE NOTICE (PCN)

### ATTACHMENT - PCN #: G-0110-06 REV.1

**PCN Type:** Mold compound materials, Sumitomo EME-7351LP and EME-S351LP.

**Data Sheet Change:** No

**Detail Of Change:** This change will be implemented on all applicable plastic package (except BGA) families.

Description	From	To
Mold Compound	Shinetsu KMC 182-9 KMC 184 KMC184VA Sumitomo 6300 Sumitomo 7320 series	Sumitomo EME-7351LP EME-S351LP

#### Conversion schedule (Estimated):

Please contact your local field sales representative for sample availability and production shipments.



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**Qualification Plan:** Following reliability tests will be performed per package family  
Qualification data is available upon request.

	Test Methods	Sample size /# Fails
Highly Accelerated Stress Test (HAST) (100 Hrs, @ 130°C/85%RH,Static Bias)	EIA/JESD22-A110	45/0
Temperature Cycling, (-65°C to +150°C, 500 cyc)	MIL-STD-883, Method 1010	45/0
Life Test, (+125°C, 1000 hrs)	MIL-STD-883, Method 1005	77/0
Hi Temp Bake, (+150°C, 1000 hrs)	MIL-STD-883, Method 1008	77/0
Auto Clave (SPP), (168Hrs, @ 2ATM, 121°C)	EIA/JESD22-A102	45/0
Package Moisture Characterization (Note 1)	JEDEC J-STD-20	22/0
Internal Visual Inspection	MIL-STD-883, Method 2010	5/0
External Visual Inspection	MIL-STD-883, Method 2009	25/0
S.A.T.	JEDEC J-STD-035	10/0
X-ray Examination	Per IDT specification	45/0
Bond Pull Test	MIL-STD-883, Method 2011	5/0
Solderability Test	MIL-STD-883, Method 2003	5/0
Bake & Ball Shear Test	EIA/JESD22-B116	5/0
Physical Dimension	MIL-STD-883, Method 2016	5/0
Lead Integrity Test	MIL-STD-883, Method 2004	3/0
Resistance to Solvents	MIL-STD-883, Method 2015	3/0

Note 1: Moisture Characterization will confirm that there is no change to the Moisture Sensitivity Level.

# SUMITOMO BAKELITE

## SUMIKON<sup>®</sup>

EME-7351LP

BI-PHENYL RESIN  
JEDEC LEVEL 1  
LOW CTE  
LONG SPIRAL FLOW

### EME-7351LP

#### TYPICAL PROPERTIES:

<u>ITEM</u>	<u>TEST METHOD</u>	<u>UNIT</u>	<u>VALUES</u>
SPIRAL FLOW	SB-U-03-003	cm	100
GEL TIME (at 175°C)	SB-U-03-005	sec	25
THERMAL EXPANSION $\alpha_1$	SB-U-02-002	$X 10^{-5} 1/^\circ C$	1.0
THERMAL EXPANSION $\alpha_2$	SB-U-02-002	$X 10^{-5} 1/^\circ C$	4.2
T <sub>g</sub>	SB-U-02-002	°C	135
THERMAL CONDUCTIVITY	SB-U-02-004	W/m •°C	$75 \times 10^{-2}$
FLEXURAL STRENGTH	SB-U-01-001	N/ mm <sup>2</sup>	
(at 25°C)			200
(at 240°C)			22
FLEXURAL MODULUS	SB-U-01-002	$X 10^2 N/mm^2$	
(at 25°C)			230
(at 240°C)			7.5
SPECIFIC GRAVITY	SB-U-03-018	-----	1.97
VOLUME RESISTIVITY	SB-U-00-004	$\Omega - cm$	$1 \times 10^{13}$
(at 150°C)			
UL FLAME CLASS	SB-U-03-003	UL-94	V-0
WATER ABSORPTION	SB-U-03-002	% weight gain	0.17
(boiling, 24 h)			
EXTRACTED Na <sup>+</sup>	SB-U-04-043	ppm	1
EXTRACTED Cl <sup>-</sup>	SB-U-04-043	ppm	10

TYPICAL, NOT GUARANTEED PROPERTIES

#### MOLDING AND POST MOLD CURE CONDITIONS:

	<u>STANDARD</u>	<u>RANGE</u>
TRANSFER PRESSURE	$85 \times 10^6 Pa$	$70-120 \times 10^6 Pa$
MOLD TEMPERATURE	175°C	165-180°C
CURE TIME (C or A)#	A/70 sec	60-120 sec
POST-MOLD CURE TEMP	175°C	170-180°C
POST-MOLD CURE TIME	6 h	4-10h

#Conventional or Auto

rev. Nov.'00

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SUMITOMO BAKELITE CO., LTD.

Tennoz Parkside Building, 5-8 Higashi-Shinagawa, 2-Chome Shinagawa-ku, Tokyo 140, Japan

# SUMITOMO BAKELITE

## SUMIKON<sup>®</sup>

EME-S351LP

BI-PHENYL RESIN  
JEDEC LEVEL 1  
LOW CTE  
LOW ALPHA RAY

## EME-S351LP

### TYPICAL PROPERTIES:

<u>ITEM</u>	<u>TEST METHOD</u>	<u>UNIT</u>	<u>VALUES</u>
SPIRAL FLOW	SB-U-03-003	cm	100
GEL TIME (at 175°C)	SB-U-03-005	sec	25
THERMAL EXPANSION $\alpha_1$	SB-U-02-002	X 10 <sup>-5</sup> 1/°C	1.0
THERMAL EXPANSION $\alpha_2$	SB-U-02-002	X 10 <sup>-5</sup> 1/°C	4.2
T <sub>g</sub>	SB-U-02-002	°C	135
THERMAL CONDUCTIVITY	SB-U-02-004	W/m •°C	75 x 10 <sup>-2</sup>
FLEXURAL STRENGTH	SB-U-01-001	N/ mm <sup>2</sup>	
(at 25°C)			200
(at 240°C)			22
FLEXURAL MODULUS	SB-U-01-002	X 10 <sup>2</sup> N/mm <sup>2</sup>	
(at 25°C)			230
(at 240°C)			7.5
SPECIFIC GRAVITY	SB-U-03-018	-----	1.97
VOLUME RESISTIVITY	SB-U-00-004	$\Omega$ - cm	1 x 10 <sup>13</sup>
(at 150°C)			
UL FLAME CLASS	SB-U-03-003	UL-94	V-0
WATER ABSORPTION	SB-U-03-002	% weight gain	0.17
(boiling, 24 h)			
EXTRACTED Na <sup>+</sup>	SB-U-04-043	ppm	1
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TYPICAL, NOT GUARANTEED PROPERTIES

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	<u>STANDARD</u>	<u>RANGE</u>
TRANSFER PRESSURE	85 x 10 <sup>6</sup> Pa	70-120 x 10 <sup>6</sup> Pa
MOLD TEMPERATURE	175°C	165-180°C
CURE TIME (C or A)#	A/70 sec	60-120 sec
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