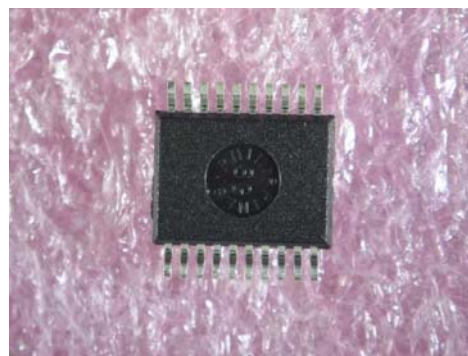


## Physical Inspection Report

Customer:	1-Source Electronic	Order ref:	TM162019-10
Manufacturer:	CRYSTAL	Requestor:	Josephine
Part Number:	CS4390-KS	Date/Time:	2007-12-27
Technician:	Arjen	Received by:	Oh Ling
datasheet :	<a href="http://www.datasheet4u.com/html/C/S/4/CS4390_CirrusLogic.pdf.html">http://www.datasheet4u.com/html/C/S/4/CS4390_CirrusLogic.pdf.html</a>		
Observations:	<p>Received 55pcs and removed 13pcs(pad stamped marking:8pcs, laser marked marking:5pcs ) at random for inspection per AQL sampling plan.</p> <p>Found 8pcs have bent leads,1pcs has exposed copper and 3pcs have contaminants on the leads. Also all have a coating on the leads.</p> <p>There are 3pcs with chips and 4pcs have marking defects (pad stamped marking) The location on the top side with pad stamped marking are different. parts have date code : 0411, 0246,0215, 0340, 9816, 0033, 0039, 0011, 0030, 0034, 9931, 9803, 0005, 9808, 0034, 9812, 0021, 9924 and 9812. Also we found all parts have pad stamped marking and laser marked marking, the pad stamped marking failed on chemical test.</p> <p>On solderability test, 95%+ could cover on the leads, so the parts passed on solderability test.</p> <p>Decapsulation shows that the IC's are original Crystal, and found the part number on the Die ( 4390 )</p> <p>X-ray shows that the internal wiring is intact.</p>		
	Analysis:	Original Crystal CS4390.	



Top-side



Bottom-side

### Receiving Inspection

Number of boxes	
Condition of box	N/A
Type of box	No Box received
Barcode label	No
Type of carrier	Tubes
ESD protection	No
MSL protection	No
Desiccant	No
HIC card	No
Bag open Date/Time	
Unit weight	0.16g
Net weight	0.02kg

### External Visual Inspection - Terminals

Horizontal alignment	Fail	QTY	8
Vertical alingment	Pass	QTY	13
Missing pins	No	QTY	
Exposed copper	Yes	QTY	1
Oxidation	Not apparent	QTY	
Contaminants	Dirt / dust	QTY	3
Lead integrity	Pass	QTY	13
Surface finish			
If BGA solder ball finishing	N/A	QTY	

### External Visual Inspection - Body

Count QTY	55		
AQL sample size	13		
Package style	SSOP-20		
Costumer PO #	TM162019-10		
Description:			
Date code:	0411/0246/0215/0340/9816/0033/0039/0011		
Lot code:			
Country of origin	Philippines		
Chips/ cracks	Yes, less than 15% of area	QTY	3
Scratches	No	QTY	
Contaminents	No	QTY	
Surface finish	Dull / rough		
Pin 1 inducator	Yes		
Dimention:	Pass	QTY	13

### External Visual Inspection - Marking

Marking Location	Top-side	if mixed, QTY:	
Marking alingment	Centered	if mixed, QTY:	
Marking color	White	if mixed, QTY:	and yellow
Application technique	Pad stamped	if mixed, QTY:	Laser marked
Font and logo consistency	consistent	if mixed, QTY:	
Surface adhesion	Surface adhesion on	if mixed, QTY:	
Physical removal test			
Chemical removal test			



Tube as arrived



Top side (Pad stamped marking and with date coc



Top side (Pad stamped marking and with date coc



Top side (Pad stamped marking and with date coc



Top side (Laser marked marking and with date coc



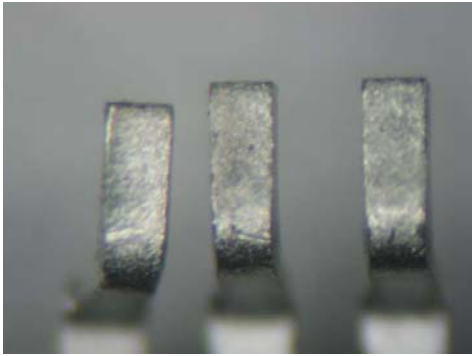
Top side (Laser marked marking and with date coc



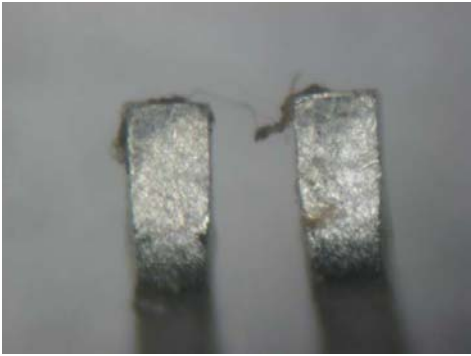
Country of origin



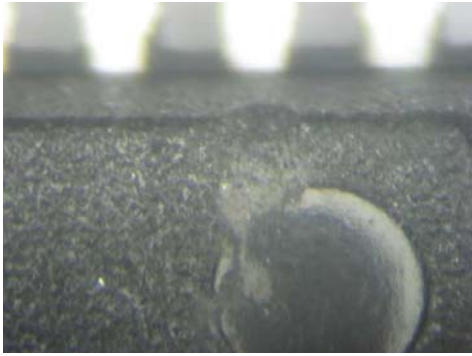
Different marking location on the top side



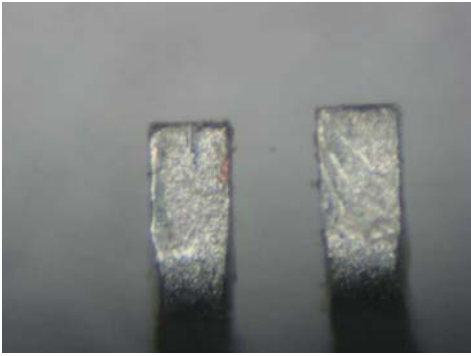
Bent leads



Contaminants on the leads



Chips



Exposed copper



Marking defect



Have a coating on the leads



Before chemical test (with Pad stamped marking))

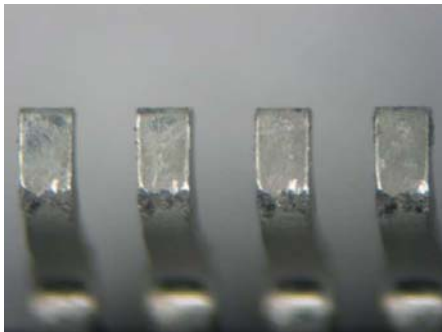


After chemical test (with Pad stamped marking))

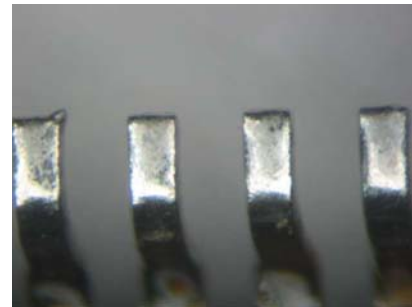
# Solderability Test

Kind of test performed	Dip and look test
Equipment used	Solder pot
Leaded / Lead free	Lead free
Test result	Pass

Notes on the test result:



Before Testing



After Testing

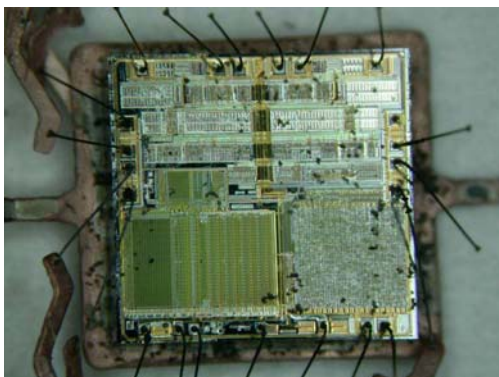
# Decapsulation

Comments on the Decapsulation pictures

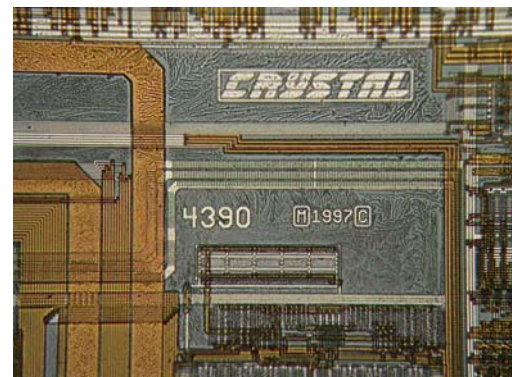
Found that the IC's are original Crystal, and found the part number on the Die ( 4390 )



IC as arrived at the LAB



Decapsulated IC



Crystal marking on the die and 4390 marking

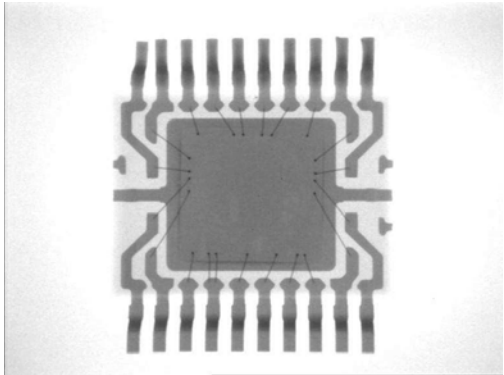
# X-Ray

Comments on the X-Ray pictures

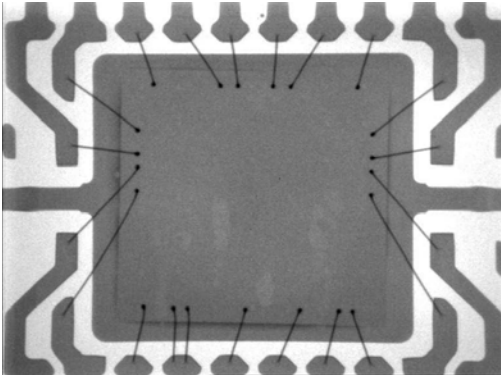
X-ray shows the parts are intact, the internal wiring is intact.



IC as arrived at the LAB



Internal wiring intact



Internal wiring intact