

Cypress Semiconductor Package Qualification Report

**QTP# 073508 VERSION 1.0
September 2007**

**85-Lead PGA Package
(22.86 x 25.40mm)
MMT-Thailand (X)**

CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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PACKAGE QUALIFICATION HISTORY

QUAL REPORT	DESCRIPTION OF QUALIFICATION PURPOSE	DATE COMP.
073508	Qualify MMT-Thailand for 85-Lead PGA Package (22.86 x 25.40mm) assembly site for Image Sensor using TF4000A device	Aug 07

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	GB85AB
Package Outline, Type, or Name:	85-Lead Pin Grid Array (PGA)
Lead Seal Method:	Glass Lid Seal
Glass Lid Material:	Kyocera Schott D263 B Stage NCO150SB
Lead Frame Substrate material:	N/A
Die Separation Method:	Saw
Die Attach Supplier:	Dexter
Die Attach Material:	QMI 505MT Conductive
Bond Diagram Designation	001-12154
Wire Bond Method:	Thermosonic
Wire Material/Size:	Al, 30um
Assembly Process Flow:	49-15999
Name/Location of Assembly (prime) facility:	MMT-Thailand (X)

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	CML-R

Note: Please contact a Cypress Representative for other packages availability.

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENT

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Bond Pull	Cypress Spec. 12-00292	P
Die Shear	Cypress Spec. 12-00292	P
Electrostatic Discharge Human Body Model (ESD-HBM)	200V JESD22, Method A114-B	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	150V Cypress Spec. 25-00020	P
External Visual	Cypress Spec. 12-00292/12-00103	P
Lead Integrity	Cypress Spec. 25-00004	P
High Temperature Storage	150°C, no bias	P
Internal Visual	Cypress Spec. 25-00017	P
Mechanical Shock	JESD22-B104-C	P
Vibration	JESD22-B103-B	P
Physical Dimension	Cypress Spec. 25-00031	P
Solderability	Cypress Spec. 25-00018	P
Temperature Cycle	JEDEC22, Condition G, -40°C to 125°C	P
Temperature Humidity	Unbiased 85C/85%RH	P

Reliability Test Data

QTP #: 073508

<i>Device</i>	<i>Fab Lot#</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: BOND PULL							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	100	0	
STRESS: DIE SHEAR							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	150	0	
STRESS: ESD-CHARGE DEVICE MODEL, 150V							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	2	0	
STRESS: ESD-HUMAN BODY CIRCUIT PER JESD22, METHOD A114-B, 200V							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	2	0	
STRESS: EXTERNAL VISUAL							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	150	0	
STRESS: HIGH TEMPERATURE STORAGE, 150C, no bias							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	500	150	0	
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	1000	140	0	
STRESS: INTERNAL VISUAL							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	5	0	
STRESS: LEAD INTEGRITY							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	3	0	
STRESS: MECHANICAL SHOCK							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	150	0	
STRESS: VIBRATION							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	150	0	
STRESS: PHYSICAL DIMENSION							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	5	0	
STRESS: TC CONDITION G, -40C TO 125C							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	500	150	0	
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	1000	150	0	
STRESS: SOLDERABILITY							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	COMP	3	0	
STRESS: TEMPERATURE HUMIDITY, unbiased 85C/85%RH							
TF4000EPAX (TF4000AX)	8637044	610707485	MMT-X	500	150	0	