Texas Instruments

Standard Linear and Logic Products

Qualification Report
For
New Product - LM4041A12I, 'A' Die Revision

8/1/05

The New Product - LM4041A12I, 'A' Die Revision is fully qualified and meets the Texas Instruments quality and reliability standards for Standard Linear and Logic Products.

Qualification Information	
Qual Type:	New Qualified device with new metal mask option
Qual Description: New product qualification of the LM4041A12I, 'A' die revision.	

Device Attributes		
Qualification Device:	LM4041C12IDBZR	LP29853.3DBV
Die Rev:	A	A
Die Size(mils)	31.1 x 46	38 x 50
Wafer Fab Site:	SFAB	SFAB
Technology:	Bipolar	Bipolar
Fab Process:	JI Bipolar	JI Bipolar
Passivation:	10KACN	10KACN
Metal1:	TiW/AlCu2%	TiW/AlCu2%
Metal2:	TiW/AlCu2%	TiW/AlCu2%
Assembly Site:	NSE	LIN
Pin Count:	3	5
Package:	DBZ	DBV
Mold Compound:	SUM EME - G600	SUM EME-6300HG
Mount Compound:	ABL 84-1 LMISR4	ABL 84-1 LMISR4
Bond:	TS-1.0 Au	TS-1.0 Au
Leadframe:	6453518	4111783-0001
L/F Finish:	NiPdAu	SnPb
Composition:	Cu	Cu
Die Overcoat:	None	None
Moist Sens Level:	Level 1/260C	Level 1/ 220C
Flammability Rating:	UL 94 V0	UL 94 V0
Down Bonds:	None	None
Pkg size(mils):	119.685 x 55.118	120.078 x 68.897
Die-Pkg area ratio:	0.22	0.23

Lot Information				
Reliability Job#	**Group**	**Lot Trace Code**	**Wafer Lot#**	**Assembly Lot#**
SHEREL.03.LP.11002	A	E3A127	3273621	3971626
SHEREL.05.LM.04005	A	N/A	5022140	5108831

Reliability Results				
			Assembly Lot#	
Test Type	**Prec**	**Condition/Duration**	**3971626**	**5108831**
Steady-state Life Test 150C	0001	300 hours	116/0	
Temperature Cycle -65C/150C	0001	1000 cycles	77/0	
ESD - HBM		2500 V		3/0
ESD - MM		200 V		3/0
ESD - CDM		1000 V		3/0
CMOS Latchup		(per JESD78 class II)		6/0
Manufacturability		(per mfg. Site specification)		pass
Electrical Char.		(Per Product Engineering)		pass

Preconditioning Information
Preconditioning Sequence: Jedec level 1/220C.
Additional Comments
The LM4041C12I device uses the same die as the LM4041A12I device.

Die Fabrication Process Family Reliability Testing Data

The following data is for testing completed during Reliability Monitor on various part number devices with die fabricated using the same die fabrication process as the subject part number device. This data is not specific to the subject device.

Test	Conditions	Quantity Tested	Failures
AUTOCLAVE	15 psig, 121 Degrees C,96 Hours	210	0
BIAS HUMIDITY	85 Degrees C / 85% RH with bias,1000 Hours	245	0
HAST	130 Degrees C / 85 % RH with bias,96 Hours	176	0
LIFE TEST	125C,1000 Hours	350	0
TEMP CYCLE	-65 / +150 Degrees C,1000 Cycles	210	0

Use Disclaimer:

Plastic encapsulated TI semiconductor devices are not designed and are not warranted to be suitable for use in some military applications and/or military environments. Use of plastic encapsulated TI

semiconductor devices in military applications and/or military environments, in lieu of hermetically sealed ceramic devices, is understood to be fully at the risk of the buyer.

Quality and Reliability Data Disclaimer:

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customer should provide adequate design and operating safeguards.

Quality and reliability data provided by Texas Instruments is intended to be an estimate of product performance based upon history only. It does not imply that any performance levels reflected in such data can be met if the product is operated outside the conditions expressly stated in the latest published data sheet for a device. Device attributes listed in qualification reports may not reflect materials or processes currently being used in the construction of the devices.

Reliability data shows characteristic failure mechanisms of the specific environmental stress as documented in the industry standards for each stress condition.

TI warrants its devices as per datasheet limits. Any usage outside of these limits is the sole responsibility of the consumer and voids all warranties and responsibilities from TI.

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