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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION**  
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**26-MAR-2002**

**SUBJECT: ON Semiconductor Final Product/Process Change Notification #12388**

**TITLE: Final Notification - Motorola BMC to Tesla: LM301, LM350, MC1403, MC78TXX**

**EFFECTIVE DATE: 25-May-2002**

**AFFECTED CHANGE CATEGORY: On Semiconductor Fab Site**

**AFFECTED PRODUCT DIVISION: Analog Products**

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Joe Duffalo <FFBH9W@onsemi.com>

**SAMPLES:** Contact your local ON Semiconductor Sales Office  
or Alan Garlington <RPR180@onsemi.com>

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact Sales Office or Alan Garlington <RPR120@onsemi.com>

**DISCLAIMER:**

Final Product/Process Change Notification (FPCN) -Final Notification completing the notification process. Distributed at least 60 days from the effective date of the change. ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact your local ON Semiconductor Sales Office.

**DESCRIPTION AND PURPOSE:**

This is a Final PCN (Product Change Notice) to notify customers of the qualification of certain Analog devices being transferred to the Tesla Wafer Fab in the Czech Republic. An initial PCN (# 11528) was published on 19 July 2001 providing information on all the devices being transferred and the overall scope of the program.

The devices listed below have been fully qualified and are now ready to transfer to Tesla from the Motorola BMC wafer fab. The existing design database in use at BMC was transferred to Tesla with no change to the functional circuit design. No change in the device functionality nor electrical distributions have been found but it is recommended that customers evaluate the devices in their applications to insure proper operation.

Samples are available upon request. At the expiration of this PCN (60 Days), fabrication of these devices will occur at either the Tesla Wafer Fab or the BMC Fab depending on capacity and demand requirements.



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**RELIABILITY DATA SUMMARY:**

Technology	Flow	Device Types	Fab	Test	Conditions		Rej	SS
Std Linear	EPI 85/92	MC33033P	Tesla	HTOL	150C; Biased,	1008 Hrs	0	240
Std Linear	EPI 85/92	MC33033P	Tesla	TC	-65C to +150C,	1000 Cyc	0	240
Std Linear	EPI 85/92	MC33033P	Tesla	HTS	150C; No Bias,	1008 Hrs	0	80
Std Linear	EPI 85/92	MC33033P	Tesla	AC	121C; 100% RH,	144 Hrs	0	240
Std Linear	EPI 85/92	MC33064D	Tesla	HTOL	150C; Biased,	1008 Hrs	0	240
Std Linear	EPI 85/92	MC33064D	Tesla	TC	-65C to +150C,	1000 Cyc	0	240
Std Linear	EPI 85/92	MC33064D	Tesla	HTS	150C; No Bias,	1008 Hrs	0	80
Std Linear	EPI 85/92	MC33064D	Tesla	AC	121C; 100% RH,	144 Hrs	0	240
Std Linear	Epi 85 DL	MC44603A	Tesla	HTOL	125C; Biased,	1000 Hrs	0	231
Std Linear	Epi 85 DL	MC44603A	Tesla	TC	-65C to +150C,	500 Cyc	0	231
Std Linear	Epi 85 DL	MC44603A	Tesla	AC	121C;100% RH;15 psi,	96 Hrs	0	231
Std Linear	Epi 85 DL	MC44603A	Tesla	HAST	130C; 85%RH biased,	96 Hrs	0	231
Std Linear	Epi 78/79	MC1413D	Tesla	HTOL	150C; Biased,	1008 Hrs	0	154
Std Linear	Epi 78/79	MC1413	Tesla	TC	-65C to +150C,	500 Cyc	0	154
Std Linear	Epi 78/79	MC1413	Tesla	AC	121C; 100% RH,	96 Hrs	0	154
Std Linear	Epi 78/79	MC1413	Tesla	HAST	130C; 85%RH; Biased,	96 Hrs	0	154
Std Linear	Epi 78/79	MC1413	Tesla	THB	85C; 85%RH; Biased,	1008 Hrs	0	154
Std Linear	Epi 78/79	MC1413	Tesla	HTS	150C; No Bias,	1008 Hrs	0	154
Std Linear	Epi 78/79	MC33079P	Tesla	HTOL	150C; Biased,	1008 Hrs	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	TC	-65C to +150C,	1000 Cyc	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	HTS	150C; No Bias,	1008 Hrs	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	AC	121C; 100% RH,	96 Hrs	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	HAST	130C; 85% RH; Biased,	96 Hrs	0	240
Std Linear	Epi 78/79	MC33079P	Tesla	THB	85C; 85% RH; Biased,	1008 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	HTOL	150C; Biased,	1008 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	TC	-65C to +150C,	1000 Cyc	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	HTS	150C; No Bias,	1008 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	AC	121C; 100% RH,	96 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	HAST	130C; 85% RH; Biased,	96 Hrs	0	240
Std Linear	Epi 78/79	UC3843AN	Tesla	THB	85C; 85% RH; Biased,	1008 Hrs	0	240

**ELECTRICAL CHARACTERISTIC SUMMARY:**

LM201/301 - 1 lot Characterization data, Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification	
						Min.	Max.
ID+	mA	1.753	0.010	1.732	1.768	0.0	3.0
ID-	mA	-1.755	0.010	-1.770	-1.734	-3.0	-0.1
VIO	mV	0.143	0.280	-0.457	0.838	-2.0	2.0
SR+	V/uS	N/A					
SR-	V/uS	N/A					
GBW	kHz	N/A					



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MC1403 -- 1 lot Characterization data, Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification	
						Min.	Max.
Vout	V	2.495	0.007	2.480	2.511	2.475	2.525
Line Reg (15 to 40V)	mV	0.197	0.178	-0.283	0.404	NA	4.5
Line Reg (4.5 to 15V)	mV	0.303	0.117	0.043	0.482	NA	3
Load Reg	mV	-2.155	0.562	-3.495	-1.071	NA	10
IQ	mA	1.096	0.0054	1.08361	1.10769	NA	1.5

LM350 -- 1 lot Characterization data, Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification	
						Min.	Max.
V Ref @ 10ma	V	1.246	.005	1.231	1.256	1.2	1.3
V Ref @ 3 A	V	1.245	.005	1.230	1.254	1.2	1.3
Line Reg(10ma)	mV	.604	.293	.0	1.300	-29	29
Load Reg(10ma-3A)	mV	1.124	.289	.5	1.900	-70	70

MC78T05 -- 1 lot Characterization data, Major parameters

Parameter	Unit	Mean	S.D.	Min.	Max.	Specification	
						Min.	Max.
V Out (5ma)	V	4.967	.010	4.939	4.986	4.8	5.2
V Out (3A)	V	4.967	.010	4.939	4.985	4.8	5.2
Load Reg (5ma-3A)	mV	-.156	.280	-.800	.300	-30.	30.
Line Reg (7-35v@ 5ma)	mV	1.956	.507	.800	2.900	-25.	25.
IQ (5ma-3A)	ma	3.319	.020	3.280	3.370		6.

**CHANGED PART IDENTIFICATION:**

Normal assembly lot traceability codes can be used to identify the wafer fab source.

**AFFECTED DEVICE LIST (WITHOUT SPECIALS):**

**PART**

- LM201AD
- LM201ADR2
- LM201AN
- LM301AD
- LM301ADR2
- LM301AN
- LM350BT
- LM350T
- MC1403BD
- MC1403BDR2
- MC1403BP1
- MC1403D
- MC1403DR2
- MC1403P1
- MC78T05ABT
- MC78T05ACT
- MC78T05BT



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MC78T05CD2T  
MC78T05CD2TR4  
MC78T05CT  
MC78T08CT  
MC78T12ACT  
MC78T12BT  
MC78T12CT  
MC78T15ABT  
MC78T15ACT  
MC78T15CT  
MCW1403  
TCM323AVBB  
TCM323VBB  
TCM78T05A-5VBB  
TCM78T12A-12VBB  
TCM78T15A-15VBB