

ON Semiconductor
Formerly a Division of Motorola



Subject: Motorola PRODUCT AND PROCESS CHANGE NOTIFICATION 4887

TITLE: 14/16/20L TSSOP 3-LAYER PRE-PLATED FRAMES

EFFECTIVE DATE: 05-NOV-99

AFFECTED CHANGE CATEGORIES

Assembly Process

Package Change

AFFECTED PRODUCT DIVISIONS

GENERAL PURPOSE PRO

ADDITIONAL RELIABILITY DATA: Available Ref: RMAN77

Contact your local Motorola Sales Office.

SAMPLES: No

Ref: RJGF60@email.sps.mot.com

For any questions concerning this notification:

REFERENCE: EXEQUIEL ABAD

PHONE: 632-808-3525

DISCLAIMER:

MOTOROLA 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 MOTOROLA SALES OFFICE.

GPCN FORMAT: CUSTOMER

DO NOT REPLY TO THIS MESSAGE.

PRODUCT AND PROCESS CHANGE NOTIFICATION

ISSUE DATE: 28-Jul-1999

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ISSUING DIVISION:PHX-GPPD

DESCRIPTION AND PURPOSE

TSSOP products are being assembled using 2-layer (Ni-Pd) pre-plated lead frames or Sn-Pb from other assembly sites. Although no issue is being encountered in using the Sn-Pb or 2-layer PPF lead frames, a 3-layer PPF lead frame will further improve the process capability of the assembly line. In addition, this change will also create better wettability at the reflow process.

Motorola Philippines at Carmona has qualified a 3-layer (Ni-Pd-Au) pre-plated lead frame for all the above packages. The required reliability tests results were very satisfactory.

QUALIFICATION PLAN

Refer to the complete reliability data.

RELIABILITY DATA SUMMARY

Passed MSL1 reliability test requirement.

ELECTRICAL CHARACTERISTIC SUMMARY

Refer to available data on electrical test yield.

CHANGED PART IDENTIFICATION

Lead frame tool markings will be in accordance with existing standards on the lead frame drawing, i.e. Nickel-Palladium-Gold pre-plated lead frames or Multi-Layer pre-plated lead frames.

FILE FORMAT: ASCII TEXT

FONT - Courier

SIZE - 12 Point

LINE - 70 characters/line

PAGE - 55 lines/page

PAGEBREAK CHARACTER - ^L (Control L)

AFFECTED DEVICE LIST (WITHOUT SPECIALS)

ENGRSAMPROTS5043,	FZ74AC04DT	, FZ74AC04DTR2	, FZ74AC08DT
FZ74AC08DTR2	, FZ74AC139DT	, FZ74AC139DTR2	, FZ74HC00ADT
FZ74HC00ADTR2	, FZ74HC02ADT	, FZ74HC02ADTR2	, FZ74HC04ADT
FZ74HC04ADTR2	, FZ74HC132ADT	, FZ74HC132ADTR2	, FZ74HC32ADT
FZ74HC32ADTR2	, MC10EP56DT	, MC10EP56DTR2	, MC12202DT
MC12202DTR2	, MC12210DT	, MC12210DTR2	, MC13055DTB
MC13055DTBEL	, MC14001BDT	, MC14007UBDT	, MC14011BDT
MC14011BDTEL	, MC14011BDTR2	, MC14013BDT	, MC14013BDTR2
MC14015BDT	, MC14020BDT	, MC14040BDT	, MC14049UBDT
MC14049UBDTR2	, MC14050BDT	, MC14050BDTEL	, MC14051BDT
MC14051BDTEL	, MC14051BDTR2	, MC14052BDT	, MC14052BDTR2
MC14053BDT	, MC14053BDTEL	, MC14053BDTR2	, MC14060BDT
MC14060BDTR2	, MC14066BDT	, MC14066BDTEL	, MC14066BDTR2
MC14069UBDT	, MC14069UBDTEL	, MC14069UBDTR2	, MC14081BDT
MC14081BDTR2	, MC14093BDT	, MC14093BDTEL	, MC14093BDTR2
MC14094BDT	, MC14094BDTR2	, MC14106BDT	, MC14106BDTR2
MC14504BDT	, MC145051DT	, MC145051DTR2	, MC145170DT1
MC145170DT2	, MC145170DT2R2	, MC145190DT	, MC145191DT
MC145191DTR2	, MC145192DT	, MC145192DTR2	, MC145200DT
MC145201DT	, MC145201DTR2	, MC145202DT	, MC145202DTR2
MC145220DT	, MC145220DTR2	, MC14538BDT	, MC14538BDTR2
MC14541BDT	, MC145481DT	, MC145481DTR2	, MC145483DT
MC145483DTR2	, MC145484DT	, MC145484DTR2	, MC14569BDT
MC14584BDT	, MC14584BDTEL	, MC14LC5480DT	, MC14LC5480DTR2
MC33074ADTB	, MC33074ADTBR2	, MC33074DTB	, MC33074DTBR2
MC33169DTB-004	, MC33169DTB-4R2	, MC33174DTB	, MC33174DTBR2
MC33184DTB	, MC33184DTBR2	, MC33204DTB	, MC33204DTBR2
MC33206DTB	, MC33206DTBR2	, MC33207DTB	, MC33207DTBR2
MC33347ADTB	, MC33347DTB	, MC33351DTB-001	, MC33351DTB-002
MC33351DTB-003	, MC33351DTB-004	, MC33351DTB-1R2	, MC33351DTB-2R2
MC33351DTB-3R2	, MC33351DTB-4R2	, MC33490DTB	, MC33490DTBR2
MC3361CDTB	, MC3361CDTBEL	, MC3361CDTBR2	, MC33765DTB
MC33765DTB-030	, MC33765DTB-30R2	, MC33765DTBR2	, MC34184DTB
MC44353DTB	, MC44353DTBR2	, MC44354DTB	, MC44354DTBR2
MC44355DTB	, MC44355DTBR2	, MC44827BDTB	, MC44827BDTBR2
MC44827DTB	, MC44827DTBR2	, MC44871DTB	, MC44871DTBR2
MC74AC00DT	, MC74AC00DTEL	, MC74AC00DTR2	, MC74AC02DT
MC74AC02DTR2	, MC74AC04DT	, MC74AC04DTEL	, MC74AC04DTR2
MC74AC08DT	, MC74AC08DTEL	, MC74AC08DTR2	, MC74AC125DT
MC74AC125DTEL	, MC74AC125DTR2	, MC74AC138DT	, MC74AC138DTEL
MC74AC138DTR2	, MC74AC139DT	, MC74AC14DT	, MC74AC14DTR2
MC74AC157DT	, MC74AC157DTR2	, MC74AC174DT	, MC74AC240DT
MC74AC240DTR2	, MC74AC244DT	, MC74AC244DTEL	, MC74AC244DTR2
MC74AC245DT	, MC74AC245DTR2	, MC74AC273DT	, MC74AC273DTR2
MC74AC32DT	, MC74AC32DTEL	, MC74AC32DTR2	, MC74AC373DT
MC74AC373DTEL	, MC74AC373DTR2	, MC74AC374DT	, MC74AC541DT
MC74AC541DTEL	, MC74AC541DTR2	, MC74AC573DT	, MC74AC573DTR2
MC74AC574DT	, MC74AC574DTEL	, MC74AC574DTR2	, MC74AC74DT
MC74AC74DTEL	, MC74AC74DTR2	, MC74AC86DT	, MC74ACT00DT
MC74ACT00DTEL	, MC74ACT00DTR2	, MC74ACT02DT	, MC74ACT02DTEL
MC74ACT02DTR2	, MC74ACT04DT	, MC74ACT04DTEL	, MC74ACT04DTR2
MC74ACT05DT	, MC74ACT05DTR2	, MC74ACT08DT	, MC74ACT08DTEL
MC74ACT08DTR2	, MC74ACT10DT	, MC74ACT10DTR2	, MC74ACT125DT
MC74ACT125DTR2	, MC74ACT138DT	, MC74ACT14DT	, MC74ACT14DTEL
MC74ACT14DTR2	, MC74ACT153DT	, MC74ACT153DTR2	, MC74ACT157DT
MC74ACT157DTR2	, MC74ACT174DT	, MC74ACT174DTEL	, MC74ACT240DT
MC74ACT241DT	, MC74ACT241DTR2	, MC74ACT244DT	, MC74ACT244DTEL
MC74ACT244DTR2	, MC74ACT245DT	, MC74ACT245DTEL	, MC74ACT245DTR2

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MC74ACT273DT	, MC74ACT273DTR2	, MC74ACT32DT	, MC74ACT32DTEL
MC74ACT32DTR2	, MC74ACT373DT	, MC74ACT373DTR2	, MC74ACT374DT
MC74ACT374DTEL	, MC74ACT540DT	, MC74ACT540DTEL	, MC74ACT540DTR2
MC74ACT541DT	, MC74ACT541DTEL	, MC74ACT541DTR2	, MC74ACT573DT
MC74ACT574DT	, MC74ACT574DTEL	, MC74ACT74DT	, MC74ACT74DTEL
MC74ACT74DTR2	, MC74ACT86DT	, MC74HC00ADT	, MC74HC00ADTEL
MC74HC00ADTR2	, MC74HC02ADT	, MC74HC02ADTEL	, MC74HC02ADTR2
MC74HC03ADT	, MC74HC03ADTEL	, MC74HC03ADTR2	, MC74HC04ADT
MC74HC04ADTEL	, MC74HC04ADTR2	, MC74HC08ADT	, MC74HC08ADTEL
MC74HC08ADTR2	, MC74HC125ADT	, MC74HC125ADTEL	, MC74HC125ADTR2
MC74HC126ADT	, MC74HC126ADTEL	, MC74HC126ADTR2	, MC74HC132ADT
MC74HC132ADTEL	, MC74HC132ADTR2	, MC74HC138ADT	, MC74HC138ADTEL
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MC74HC165ADT	, MC74HC165ADTR2	, MC74HC165DTR2	, MC74HC174ADT
MC74HC174ADTEL	, MC74HC174ADTR2	, MC74HC175ADT	, MC74HC175ADTR2
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MC74HC245ADTR2	, MC74HC259DT	, MC74HC259DTR2	, MC74HC273ADT
MC74HC273ADTEL	, MC74HC273ADTR2	, MC74HC30DT	, MC74HC32ADT
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MC74HC365ADT	, MC74HC365ADTEL	, MC74HC365ADTR2	, MC74HC365DT
MC74HC365DTR2	, MC74HC367ADT	, MC74HC367ADTEL	, MC74HC373ADT
MC74HC373ADTEL	, MC74HC373ADTR2	, MC74HC374ADT	, MC74HC374ADTEL
MC74HC374ADTR2	, MC74HC390ADT	, MC74HC390ADTR2	, MC74HC393ADT
MC74HC393ADTR2	, MC74HC4020ADT	, MC74HC4020ADTR2	, MC74HC4024DT
MC74HC4040ADT	, MC74HC4040ADTEL	, MC74HC4046ADT	, MC74HC4046ADTR2
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MC74HC4852ADTR2	, MC74HC540ADT	, MC74HC540ADTEL	, MC74HC541ADT
MC74HC541ADTEL	, MC74HC541ADTR2	, MC74HC573ADT	, MC74HC573ADTEL
MC74HC573ADTR2	, MC74HC574ADT	, MC74HC574ADTR2	, MC74HC589ADT
MC74HC589ADTR2	, MC74HC595ADT	, MC74HC595ADTEL	, MC74HC595ADTR2
MC74HC597ADT	, MC74HC640ADT	, MC74HC640ADTEL	, MC74HC688DT
MC74HC688DTR2	, MC74HC74ADT	, MC74HC74ADTEL	, MC74HC74ADTR2
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MC74HC86ADTR2	, MC74HCT00ADT	, MC74HCT00ADTR2	, MC74HCT04ADT
MC74HCT04ADTEL	, MC74HCT04ADTR2	, MC74HCT08ADT	, MC74HCT08ADTR2
MC74HCT138ADT	, MC74HCT138ADTR2	, MC74HCT14ADT	, MC74HCT14ADTR2
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MC74HCT244ADTR2	, MC74HCT245ADT	, MC74HCT245ADTR2	, MC74HCT273ADT
MC74HCT273ADTR2	, MC74HCT32ADT	, MC74HCT32ADTEL	, MC74HCT32ADTR2
MC74HCT373ADT	, MC74HCT373ADTR2	, MC74HCT374ADT	, MC74HCT374ADTR2

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MC74HCT541ADT	, MC74HCT541ADTR2	, MC74HCT573ADT	, MC74HCT573ADTR2
MC74HCT574ADT	, MC74HCT574ADTR2	, MC74HCT74ADT	, MC74HCU04ADT
MC74HCU04ADTEL	, MC74HCU04ADTR2	, MC74LCX00DT	, MC74LCX00DTEL
MC74LCX00DTR2	, MC74LCX02DT	, MC74LCX02DTEL	, MC74LCX02DTR2
MC74LCX04DT	, MC74LCX04DTEL	, MC74LCX04DTR2	, MC74LCX08DT
MC74LCX08DTEL	, MC74LCX08DTR2	, MC74LCX125DT	, MC74LCX125DTEL
MC74LCX125DTR2	, MC74LCX138DT	, MC74LCX138DTR2	, MC74LCX157DT
MC74LCX157DTR2	, MC74LCX240DT	, MC74LCX240DTR2	, MC74LCX244DT
MC74LCX244DTEL	, MC74LCX244DTR2	, MC74LCX245DT	, MC74LCX245DTEL
MC74LCX245DTR2	, MC74LCX257DT	, MC74LCX257DTR2	, MC74LCX32DT
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MC74LCX374DT	, MC74LCX374DTR2	, MC74LCX540DT	, MC74LCX541DT
MC74LCX541DTEL	, MC74LCX541DTR2	, MC74LCX573DT	, MC74LCX573DTR2
MC74LCX574DT	, MC74LCX574DTEL	, MC74LCX574DTR2	, MC74LCX74DT
MC74LCX74DTR2	, MC74LCX86DT	, MC74LCX86DTR2	, MC74LVQ04DT
MC74LVQ04DTR2	, MC74LVQ74DT	, MC74LVX00DT	, MC74LVX00DTR2
MC74LVX02DT	, MC74LVX02DTR2	, MC74LVX04DT	, MC74LVX04DTR2
MC74LVX08DT	, MC74LVX08DTR2	, MC74LVX125DT	, MC74LVX125DTR2
MC74LVX126DT	, MC74LVX126DTR2	, MC74LVX132DT	, MC74LVX132DTR2
MC74LVX138DT	, MC74LVX138DTR2	, MC74LVX139DT	, MC74LVX139DTR2
MC74LVX14DT	, MC74LVX14DTR2	, MC74LVX157DT	, MC74LVX157DTR2
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MC74LVX541DT	, MC74LVX541DTR2	, MC74LVX573DT	, MC74LVX573DTR2
MC74LVX574DT	, MC74LVX574DTR2	, MC74LVX595DT	, MC74LVX595DTR2
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MC74LVX8053DT	, MC74LVX8053DTR2	, MC74LVX86DT	, MC74LVX86DTR2
MC74LVXT4066DT	, MC74LVXT4066DTR2	, MC74LVXT8051DT	, MC74LVXT8051DTR2
MC74LVXT8053DT	, MC74LVXT8053DTR2	, MC74VHC00DT	, MC74VHC00DTR2
MC74VHC00TEL	, MC74VHC02DT	, MC74VHC02DTR2	, MC74VHC04DT
MC74VHC04DTR2	, MC74VHC08DT	, MC74VHC08DTR2	, MC74VHC125DT
MC74VHC125DTR2	, MC74VHC126DT	, MC74VHC126DTR2	, MC74VHC132DT
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MC74VHC139DTR2	, MC74VHC14DT	, MC74VHC14DTR2	, MC74VHC157DT
MC74VHC157DTR2	, MC74VHC240DT	, MC74VHC240DTR2	, MC74VHC244DT
MC74VHC244DTR2	, MC74VHC245DT	, MC74VHC245DTR2	, MC74VHC32DT
MC74VHC32DTR2	, MC74VHC373DT	, MC74VHC373DTR2	, MC74VHC374DT
MC74VHC374DTR2	, MC74VHC390DT	, MC74VHC390DTR2	, MC74VHC393DT
MC74VHC393DTR2	, MC74VHC4051DT	, MC74VHC4051DTR2	, MC74VHC4052DT
MC74VHC4052DTR2	, MC74VHC4053DT	, MC74VHC4053DTR2	, MC74VHC4066DT
MC74VHC4066DTR2	, MC74VHC4538DT	, MC74VHC4538DTR2	, MC74VHC540DT
MC74VHC540DTR2	, MC74VHC541DT	, MC74VHC541DTR2	, MC74VHC573DT
MC74VHC573DTR2	, MC74VHC574DT	, MC74VHC574DTR2	, MC74VHC595DT
MC74VHC595DTR2	, MC74VHC74DT	, MC74VHC74DTR2	, MC74VHC86DT
MC74VHC86DTR2	, MC74VHCT00ADT	, MC74VHCT00ADTR2	, MC74VHCT04ADT
MC74VHCT04ADTR2	, MC74VHCT138ADT	, MC74VHCT138ADTR2	, MC74VHCT240ADT
MC74VHCT240ADTR2	, MC74VHCT244ADT	, MC74VHCT244ADTR2	, MC74VHCT245ADT
MC74VHCT245ADTR2	, MC74VHCT373ADT	, MC74VHCT373ADTR2	, MC74VHCT374ADT

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MC74VHCT374ADTR2, MC74VHCT4051DT , MC74VHCT4051DTR2, MC74VHCT4053DT
MC74VHCT4053DTR2, MC74VHCT4066DT , MC74VHCT4066DTR2, MC74VHCT540ADT
MC74VHCT540ADTR2, MC74VHCT541ADT , MC74VHCT541ADTR2, MC74VHCT573ADT
MC74VHCT573ADTR2, MC74VHCT574ADT , MC74VHCT574ADTR2, MC74VHCT74ADT
MC74VHCT74ADTR2 , MC74VHCU04DT , MC74VHCU04DTR2 , MCCS142237DT
MCCS142237DTR2 , MPC17A17DTB , MPC17A17DTBEL , MPC17A17DTBR2
MPC17A17XDTB , MPC17A17XDTR2 , MRFIC0001 , MRFIC0001R2
MRFIC0920 , MRFIC0920R2 , MRFIC1805 , MRFIC1805R2
MRFIC1813 , MRFIC1813R2 , MRFIC1814 , MRFIC1814R2
PC100EP139DT , PC10EP56DT , PC10SX1190DT , PC33170DTB
PC33170DTR2 , PC33491DTB , PC33765DTB , PC33765DTB-030
PC33765DTB-30R2 , PC33765DTR2 , PC34281DT , PC44BC380DTB
PC765DTB-030 , PO74AC139DT , PO74AC139DTR2 , PO74HC132ADT
PO74HCT245ADT , PPC17A17DTB , PPC17A17DTR2 , SC028MG053BDTER
SC111717DTB , SC111717DTR2 , SC371070DT , SC371070DTEL
SRFIC40K05 , SRFIC40K08 , SRFIC40K10 , SRFIC9Z67
TSC14051BDT , TSC14051BDTEL , TSC14051BDTR2 , TSC14052BDT
TSC14052BDTEL , TSC14052DTR2 , TSC14053BDT , TSC14053BDTEL
TSC14053DTR2 , TSC14066BDT , TSC14066DTR2 , TSC74LCX244DTR2
TY33169DTB-004 , TY33169DTB-4R2 , TY50000E , TY51043DTB
TY51043DTR2 , XC145482DT , XC145482DTR2 , XC33347DTB
XC44871DTB , XY33170SDBT , XY33170SDTR2 , XYB44827DTR2