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Consumer Solutions & Support
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FIELD SERVICE BULLETIN

FSB Number: LVCCFSB2004 – 148 (Rev. A)
Author: Rajesh Verma
Date: July 20, 2004
Total No. of Pages: 3
Subject: **Intel Flash IC – Erase Disturb (checksum error)**
Model Affected: ALL GSM, CDMA, 3G handsets using Intel 128M or 256M
                   Flash IC's
Level of Repair: 3, 4

Problem

Service is aware of an issue, identified in the 1st 200 NPI Analysis of the all GSM Triplets models, with the Flash IC. A large percentage of the customer returns, returned with complaints of "No Power Up" were found to display the following symptoms:
1) The unit will not power up with either the phones battery or when using an external supply through the CE connector;
2) The unit will display "Checksum Error Found" when ran through FDI tool.
Analysis revealed the failure was caused by a faulty Intel Flash IC due to Erase Disturb failure mechanism. The following parts are affected
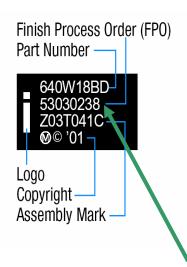
Motorola P/N	Intel P/N	Comments	Programs Using Device
5103670B01	GE28F128L18B85 T&R	Turin p/n	V180, C380
5103536B01	GE28F128L18B85 Tray	Turin p/n	V180, C380
5103670B05	PH28F128L18B85 T&R	Turin p/n, Pb-Free	A1000, M1000
5103670B06	PH28F128L18B85 Tray	Turin p/n, Pb-Free	A1000, M1000
5199163J01	RD48F3000L0YBQ0 T&R	128/0	
5199164J01	RD48F3000L0YBQ0 Tray	128/0	
5199175J01	PF48F3000L0YBQ0 Tray	128/0, Pb-Free	V260, V265 (Mollusk)
5199176J01	PF48F3000L0YBQ0 T&R	128/0, Pb-Free	V260, V265 (Mollusk)
5170200A10	RD38F3040L0YBQ0 Tray	128/32p 1.8V	V220, C650
51xxx	RD38F3040L0ZBQ0 T&R	128/32p, 3V	C357, C358
51xxx	RD38F3040L0ZBQ0 Tray	128/32p, 3V	C357, C358
5189419N01	RD38F3340LLYDQ1 T&R	128/128/32p 1.8V, 2-CE	V300, V400, V500, V600, T725
5189438N01	RD38F3340LLYDQ1 Tray	128/128/32p 1.8V, 2-CE	V300, V400, V500, V600, T725
5189808N01	GE28F256L30B90		
5199161J01	NZ48F4000L0YBQ0 T&R	256/0, 1.8V	
5199162J01	NZ48F4000L0YBQ0 Tray	256/0, 1.8V	
5199150J01	RD38F4050L0YBQ0 T&R	256/64bp, 1.8V, 5189834N01	E398, A630, V80, V710, V650
5199153J01	RD38F4050L0YBQ0 Tray	256/64bp, 1.8V, (150J02)	E398, A630, V80, V710, V650
5199159J01	PF38F4050L0YBQ0 T&R	256/64bp, 1.8V, Pb-Free	V3, A840, A860, MM05
5199160J01	PF38F4050L0YBQ0 Tray	256/64bp, 1.8V, Pb-Free	V3, A840, A860, MM05
51xxx	PF38F4350LLYBQ0	256L/128L/64p, P-F	Pebble
5199174J01	PF48F4400L0YDQ0 T&R	256/256 (x16), P-F, (511J01)	A1000, M1000
5199178J01	RZ48F4400L0YBP0 T&R	256/256 (x32), P-F	V975, V980, C975, C980
5199179J01	RZ48F4400L0YBP0 Tray	256/256 (x32), P-F	V975, V980, C975, C980

MOTOROLA INTERNAL USE ONLY   Page 1

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Solution

As of June 18, 2004 this issue has been eliminated (zero DPM) by implementing a screen by Intel at the post assembly electrical test step for all Tyax Flash IC devices. See below example on how to verify date code from the flash IC. The example illustrates part manufactured in week 03 of 2003.

Finish Process Order (FPO)
Part Number —

```
640W18BD
53030238
Z03T041C
Ⓜ© '01
```

Logo
Copyright
Assembly Mark

Plant	Year	Week	Serial
5	3	03	0238

Note: Example how to read date code
From the 2nd line of Flash IC.

Good Material = WW26 '2004 (X426YYYY)

Field Service Action

Customer Returns:

The following procedure must be preformed on all "No Turn On" GSM Triplets/CDMA/3G phones returned through service.

1) Ensure that the "No Turn On" failure is not hardware related. If the failure is not due to hardware, then continue to Step 2,
2) Run the unit through the FDI tool. Refer to FSB LVCCFSB2003-68 Rev B for detailed description of FDI Corruption Analysis
3) If the unit shows "Checksum Error' during FDI analysis procedure(s) then, per the normal Service Procedure, replace the Flash IC (refer to the table above for the part number reference).
   Note: Flash replacement does not apply to CDMA products. CDMA units determined to contain a bad flash need to be swapped due to anti-cloning protection.
4) If the tool does not display "Checksum Error", then follow the normal troubleshooting techniques per the customer complaint
   a. If unit shows a different error when ran on the FDI Tool, refer to the FSB LVCCFSB2003-68 Rev B.

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NOTE: This failure mode occurs on affected flash IC's after multiple re-flash cycles. This is usually seen when the bad block sees 3-5 erases on the good block. It could happen anywhere depend on where and how many times the unit has been flashed.

Service Inventory:

RMA Process for the return of affected raw material inventory is currently being defined with CTE and Intel. An update to this FSB will be posted as soon as a process is defined. Please quarantine all affected raw material, with date code prior to WW26 '2004, inventory to be returned to Intel for screening.

Call Center Action:

If the customer calls with any "NO Power Up" complaint, then have the customer return the unit to an authorized service center for repair.

Service Entry Code

Please ensure that repairs of this type are logged on the Service Link database as follows:

Global Service Codes:

Customer Complaint:	TON01	Turn ON/OFF-No Turn On
Problem Found:	TON08	FDI Corruption
Repair Reason:	REP01	Replace Electrical Part - Defective
Reference Designator:	U	IC

PRC Service Codes:

Complaint Code:	2001	Turn ON/OFF- No Turn On
Root Cause Code:	1201	Replace Electrical Part - Defective