
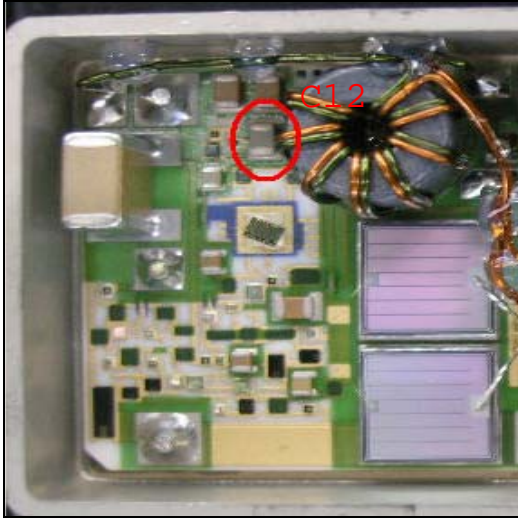


# ALERT

1. TITLE (Class, Function, Type, etc.) Filter Assembly, Electrical, Hybrid Product		2. DOCUMENT NUMBER FV5-A-09-01A
		3. DATE (DD-MMM-YY) 13 January 2011
4. MANUFACTURER AND ADDRESS International Rectifier, HiRel 2520 Junction Ave. San Jose, CA 95134	5. PART NUMBER See Document	6. NATIONAL STOCK NUMBER See Database
	7. SPECIFICATION MIL-PRF-38534	8. TYPE DESIGNATOR QML
	9. LOT DATE CODE START See Document	10. LOT DATE CODE END See Document
11. MANUFACTURER'S POINT OF CONTACT Granville C. Rains, Mgr. Qlty & Prod Assurance	12. CAGE 52467	13. MANUFACTURER'S FAX (408) 434-5220
14. MFR. POC PHONE (408) 434-5086	15. MANUFACTURER'S E-MAIL Grains1@irf.com	
16. CROSS REFERENCE VENDOR No Applicable	17. CROSS REFERENCE CAGE Not Applicable	18. CROSS REFERENCE PART Not Applicable
19. PROBLEM DESCRIPTION / DISCUSSION / EFFECT <p>This amendment has been issued to add additional part numbers affected by this Alert. Page 1 has been revised with manufacturer current address and POC information. Page 2 as contained in original document. Page 3 contains amendment A. This document is complete.</p> <p>The AFM704A/CH and AFM704AN/CH FILTER, EMI, TRANSIENT SUPPRESSION MODULE product listed above were identified with a potential reliability problem. A chip capacitor with Tin Lead (SnPb) termination was used in error in place of a capacitor of the same value, but with Palladium Silver (PdAg) termination specification. The circuit designation for this chip capacitor is C12 and requires conductive epoxy for its attachment in-circuit.</p> <p>While no field operational failures have been reported to International Rectifier with the AFM704 hybrid products that could be attributed to this issue, our reliability data shows a compatibility issue with epoxy mounted chip capacitors with Tin Lead terminations – these can lead to epoxy interface (joint) failure in time under normal use conditions. If the C12 capacitor / epoxy interface fails, it could result in an open circuit, including a loose capacitor inside the hybrid. This failure condition could cause an electrical failure and result in a complete shutdown of the module.</p>		
20. ACTION TAKEN/PLANNED <p>International Rectifier has taken the following corrective actions:</p> <ol style="list-style-type: none"><li>1) Reviewed all designs that use the C12 component to verify the attach media. No other product was affected.</li><li>2) Replaced the C12 capacitor in the AFM704A series hybrids with a capacitor that is suitable for epoxy attach.</li><li>3) Identified all AFM704 series affected by this C12 component – See attached list herein for details.</li><li>4) Updated Design Rules Check sheets to verify component termination &amp; attach media for compatibility.</li></ol> <p>As part of containment activity, International Rectifier recommends that the subject product be returned for rework or replacement as necessary. For assistance in returning the product, contact the local manufacturer's representative or customer services at (978) 534-5776.</p> <p>This Alert has been coordinated with DSCC-VQH prior to its release.</p>		
21. DATE MFR. NOTIFIED Not Applicable	22. MANUFACTURER'S RESPONSE <input type="checkbox"/> REPLY ATTACHED <input type="checkbox"/> Not Applicable <input type="checkbox"/> NO REPLY	23. ORIGINATOR ADDRESS/POINT OF CONTACT Granville C. Rains, Manager, Quality Assurance International Rectifier 2270 Martin Ave Santa Clara, CA 95050
24. GIDEP REPRESENTATIVE Granville C. Rains	25. SIGNATURE 	26. DATE 13 Jan. 2011

19. PROBLEM DESCRIPTION / DISCUSSION / EFFECT- Continued.



Capacitor C12 – Epoxy Mount Type

20. ACTION TAKEN/PLANNED- Continued

Affected Material:

Part Number	D/C	S/N	Part Number	D/C	S/N
AFM704A/CH*B	0707	0703071,072	AFM704AN/CH*B	0750	0747001-024
AFM704A/CH*B	0707	0703073-078	AFM704AN/CH*B	0824	0821017-026
AFM704A/CH*B	0707	0703079-094	AFM704AN/CH*B	0824	0821001-003
AFM704A/CH*B	0707	0703095, 096-100	AFM704AN/CH*B	0824	0821004-014, 016
AFM704A/CH*B	0712	0703039-046	AFM704AN/CH*B	0824	0821029-040
AFM704A/CH*B	0712	0703047-050	AFM704AN/CH*B	0825	0821015
AFM704A/CH*B	0727	0721001, 002, 004-015, 017-022	AFM704AN/CH*B	0835	0828048
AFM704A/CH*B	0727	0721023-034, 036-039	AFM704AN/CH*B	0838	0828044
AFM704A/CH*B	0727	0721040-055	AFM704AN/CH*B	0847	0843001-008
AFM704A/CH*B	0727	0721056-063	AFM704AN/CH*B	0847	0843020-029
AFM704A/CH*B	0727	0721064-075, 077-088, 090-092			
AFM704A/CH*B	0727	0721093-100			
AFM704A/CH*B	0728	0721133, 134, 136-145, 147-150			
AFM704A/CH*B	0728	0721114-120, 122			
AFM704A/CH*B	0728	0721123-132			
AFM704A/CH*B	0733	0727087-091			
AFM704A/CH*B	0733	0727003-014, 016-019			
AFM704A/CH*B	0733	0727020, 021, 023, 024, 026-037			
AFM704A/CH*B	0733	0727038-040, 042-053, 055			
AFM704A/CH*B	0733	0727057-060, 062-066, 092-100			
AFM704A/CH*B	0737	0727022, 041, 056, 078, 080, 101, 102, 104-106, 108-111			
AFM704A/CH*B	0737	0727112-123			
AFM704A/CH*B	0737	0727124-129			
AFM704A/CH*B	0737	0727130-145			
AFM704A/CH*B	0745	0727001, 025			
AFM704A/CH*B	0746	0734086, 097			
AFM704A/CH*B	0750	0734036, 042, 049, 008, 120, 122, 124, 132, 148			
AFM704A/CH*B	0750	0744044-047, 050			
AFM704A/CH*B	0752	0744119, 136			
AFM704A/CH*B	0819	0815012-022, 024			
AFM704A/CH*B	0822	0815069, 072, 083, 101, 105, 114			
AFM704A/CH*B	0823	0815004, 008, 010, 023, 029			
AFM704A/CH*B	0826	0822032-052			
AFM704A/CH*B	0826	0822077-083, 085-109			
AFM704A/CH*B	0826	0822110-115, 117-125			
AFM704A/CH*B	0826	0822126-140			
AFM704A/CH*B	0829	0822072, 084			
AFM704A/CH*B	0830	0822116			
AFM704A/CH*B	0915	0902099, 100			
AFM704A/CH*B	0915	0902051-070			
AFM704A/CH*B	0915	0902071-090			

International Rectifier, HiRel In reviewing GIDEP# FV5-A-09-01 has been determined that additional material is affected.

Part Number	D/C	S/N	Part Number	D/C	S/N
AFM704A*B	0628	0621012-019, 022-035	AFM704A/CH*S	0325	0319131-150,152-159
AFM704A*B	0636	0631015-019, 021-052, 054-056, 059-074	AFM704A/CH*S	0326	0319101-113,115-130
AFM704A*B	0640	0637001-085, 087-100	AFM704A/CH*S	0328	0319159,162-168, 170,172-177,19-192,194, 196-200, 205-213,215-222,224
AFM704A*B	0643	0637086	AFM704A/HB*B	0419	0419106-108,130
AFM704A*S	0211	0152107,108,112,111,115,116,118,140-142,144,147-149,151	AFM704A/HB*B	0432	0419104,109,129
AFM704A/CH	0138	0113115, 117,135,137-139	AFM704A/HB*B	0520	0513166,165,167,169-178,180,181
AFM704A/CH*B	0423	0419101,102,103,105,113,114,115,117,118, 121,123,125,126,128	AFM704A/HB*B	0614	0611106-111,113-121
AFM704A/CH*B	0432	0419110	AFM704A/HB*B	0638	0635017-026
AFM704A/CH*B	0446	0441102-104,106-113,115-119,123,125-128,133-139, 141,142,144-161, 163-165	AFM704A/HB*B	0640	0637001-052, 054-089, 091, 093-096, 098-100
AFM704A/CH*B	0503	0441143	AFM704A/HB*B	0640	0643051, 053-068, 070-072, 074-100
AFM704A/CH*B	0512	0441114,121	AFM704A/HB*B	0644	0643001-050
AFM704A/CH*B	0520	0513101-107,109-132,134-144,146,147-154,156-160,194	AFM704A/HB*B	0645	0642001-026, 028-050
AFM704A/CH*B	0614	0611101-105,0611122, 124-131, 133, 136, 138-142, 144-150	AFM704A/HB*B	0646	0642051-060, 062-072, 074-100
AFM704A/CH*B	0616	0611123, 143	AFM704A/HB*B	0649	0646001-006, 008-025, 027-159, 161, 162, 164-175
AFM704A/CH*B	0618	0611112, 137	AFM704A/HB*B	0707	0703051-070
AFM704A/CH*B	0628	0621001-003, 005-011, 038-047,049,050	AFM704A/HB*B	0712	0703019-035, 037, 038
AFM704A/CH*B	0632	0621048	AFM704A/HB*S	0211	0152152,153,155,157-160
AFM704A/CH*B	0634	0621021	AFM704A/HB*S	0212	0152119,123,124,127-129,132-135,137-139
AFM704A/CH*B	0637	0611132	AFM704A/HB*S	0215	0209197,216
AFM704A/CH*B	0638	0621004	AFM704A/HB*S	0328	0319250
AFM704A/CH*B	0638	0635001-015, 027-034, 036-059, 061-100	AFM704AN/CH	0115	01011040
AFM704A/CH*B	0642	0635060	AFM704AN/CH	0148	0127112-115
AFM704A/CH*B	0642	0637053,092	AFM704AN/CH	0246	0242101-105
AFM704A/CH*B	0643	0637097	AFM704AN/CH*B	0410	0406104,107-111,113-119,121,122,125
AFM704A/CH*B	0647	0643052,073	AFM704AN/CH*B	0512	0510101-106,108-115
AFM704A/CH*B	0651	0646007,026,160	AFM704AN/CH*B	0513	0510116-125
AFM704A/CH*B	0707	0703071,072	AFM704AN/CH*B	0521	0516101-109,111-117, 119,120
AFM704A/CH*S	0215	0209106,111,115,118,121,123,124,126-128,137,138,140,142-144,146,147,158-160,164,168,173,181, 193,199,210,218,223,237,239,244,245,247	AFM704AN/CH*B	0525	0516110,118
AFM704A/CH*S	0217	0209184,187,188,189,200, 203,215,219,222,231,234,236,238	AFM704AN/CH*B	0528	0522101-114,116-120
AFM704A/CH*S	0312	0152109,113,114,120,122,125,130,131,136, 143,145,146,150	AFM704AN/CH*B	0543	0535101-104,106,108-112,114-124,126,128-130,132-135,138,140,142-150
AFM704A/CH*S	0312	0209101,107,110,117,131,132,141,148,163, 167,179,182,191,192,201,206,209,211,213, 217,220,230,235,242,243,246,	AFM704AN/CH*B	0549	0535110, 125, 136, 137, 141
AFM704A/CH*S	0312	0225101-103,105-107,109-122,125-136,138-149,151-165	AFM704AN/CH*B	0552	0535113, 131, 139
AFM704A/CH*S	0319	0313101-122,124,129	AFM704AN/CH*S	0325	0318102-116,118-125
AFM704A/CH*S	0320	0313130-159,161-170,172-207,209-241,243-250			