



Expertise Applied | Answers Delivered

May, 15th, 2014

LFPCN 41216 TVS Structure Simplification

To our valued customers,

Similar to PCN#41197 issued in April 2013, Littelfuse would like to notify you that Littelfuse will migrate some of the existing stacked chips P/Ns to single or reduce-numbered stacked chips to achieve productivity efficiency as well as quality improvement yet still meet current electrical datasheet specification with sufficient margin

The affected P/Ns of this structure simplification project are listed as attached.

There will be no changes to fit, form, shape and function of the finished product in accordance with established performance and reliability qualification criteria

Part Number Changes: None

Migration Period: Aug 15th to Dec 31th, 2014

Qualification Sample Available: May 30th, 2014

Final Qualification Data Available: May 15th, 2014

Replacement Products: N/A

Last Time Buy: N/A

If you have any other question or concerns, please contact Littelfuse® local sales representative, or Meng Wang, Assistant Product Manager.

We highly value your business and look forward to assisting you whenever possible.

Best Regards,

Meng Wang

Assistant Product Manager,

Tel: +86 510 85277955

Mwang3@littelfuse.com



8755 West Higgins Road Suite 500, Chicago, IL, 60631

Product/Process Change Notice (PCN)

PCN#: LFPCN41216 **Date:** May15th 2014

Product Identification:

LFUS TVS Product Family

Implementation Date for Change:

May 15th 2014

Contact Information

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Category of Change:

- Assembly Process
- Data Sheet
- Technology
- Discontinuance/Obsolescence
- Equipment
- Manufacturing Site
- Raw Material
- Testing
- Fabrication Process
- Other: _____

Description of Change:

With the continuous process and product quality improvement efforts, Littelfuse would like to notify our valued customers of structure simplification of our current stacked-die TVS products for the better quality improvement , P/Ns and further details can be found on attached file .The migration day will be effective starting from Aug 15th 2014 to Dec 31th 2014

Important Dates:

- Qualification Samples Available: May 15th 2014 Last Time Buy: N/A
- Final Qualification Data Available: May 15th 2014
- Date of Final Product Shipment:

Method of Distinguishing Changed Product

- Product Mark,
- Date Code, 4Hxxx for Surface Mount and 1433 for Axial Device
- Other,

Demonstrated or Anticipated Impact on Form, Fit, Function or Reliability:

NA

LF Qualification Plan/Results:

Littelfuse Qualification Report is available

Customer Acknowledgement of Receipt: Littelfuse requests you acknowledge receipt of this PCN. In your acknowledgement, you can grant approval or request additional information. Littelfuse will assume the change is acceptable if no acknowledgement is received within 30 days of this notice. Lack of any additional response within 90 days of PCN issuance further constitutes acceptance of the change.

PCN report- Qualification Report

Prepared by: Connie Li— TVS Product Engineer

Date: April 29, 2014

Device: TVS

Revision: A

1.0 Objective

The purpose of this project is to simplify the TVS structure and optimize the process for better quality and process control.

2.0 Qualification Result Summary

2.1 Surge capability evaluation

Test Items	Sample P/N	Sample Size	LF test refer#	Condition	Result Summary
10/1000us surge test	P4SMA300A	10	56537	+/- 1 hit, from rated IPP with 0.1*IPP increase at each step	100% passed at rated IPP per LF datasheet
	SMBJ200CA	10	56071		
	SMBJ220CA	10	56071		
	P6SMB220CA	10	53848		
	P6SMB300A	10	56338		
	P6SMB300CA	10	56071		
	1KSMB47A	10	57440		
	1KSMB180CA	10	53848		
	1.5SMC300A	10	56991		
	1.5SMC300CA	10	56072		
	P4KE150CA	10	56072		
	P4KE91CA	10	56072		
	P4KE300A	10	56991		
P6KE300A	10	53262			

2.2 Reliability evaluation, HTRB test was applied .

Sample P/N	Sample Size	Result	LF test refer#	Standard
P4SMA300A	50	0/50	58569	JESD22-A108
P6SMB300CA	50	0/50	58569	
P6KE300A	50	0/50	57993	
1.5SMC300CA	50	0/50	58569	

3.0 Attachment I Part No. List

#	F/G PN	Package
1	SMAJ180	DO-214AC
2	SMAJ220A	DO-214AC
3	SMAJ220	DO-214AC
4	SMAJ250A	DO-214AC
5	P4SMA250	DO-214AC
6	P4SMA250A	DO-214AC
7	P4SMA300	DO-214AC
8	P4SMA300A	DO-214AC
9	SMBJ110C	DO-214AA
10	SMBJ110CA	DO-214AA
11	SMBJ120C	DO-214AA
12	SMBJ120CA	DO-214AA
13	SMBJ130C	DO-214AA
14	SMBJ130CA	DO-214AA
15	SMBJ150C	DO-214AA
16	SMBJ150CA	DO-214AA
17	SMBJ160C	DO-214AA
18	SMBJ160CA	DO-214AA
19	SMBJ170C	DO-214AA
20	SMBJ170CA	DO-214AA
21	SMBJ180C	DO-214AA
22	SMBJ180CA	DO-214AA
23	SMBJ188CA	DO-214AA
24	SMBJ200C	DO-214AA
25	SMBJ200CA	DO-214AA
26	P6SMB130CA	DO-214AA
27	P6SMB130C	DO-214AA
28	P6SMB150CA	DO-214AA
29	P6SMB150C	DO-214AA
30	P6SMB160CA	DO-214AA
31	P6SMB160C	DO-214AA
32	P6SMB170CA	DO-214AA
33	P6SMB170C	DO-214AA
34	P6SMB180CA	DO-214AA
35	P6SMB180C	DO-214AA
36	P6SMB200C	DO-214AA
37	P6SMB200CA	DO-214AA
38	P6SMB220CA	DO-214AA
39	P6SMB220C	DO-214AA
40	SMBJ220	DO-214AA
41	SMBJ220A	DO-214AA
42	SMBJ250A	DO-214AA

#	F/G PN	Package
171	3KP48CA-B	P600
172	3KP51C-B	P600
173	3KP51CA-B	P600
174	3KP54C-B	P600
175	3KP54CA-B	P600
176	3KP58C-B	P600
177	3KP58CA-B	P600
178	3KP60C-B	P600
179	3KP60CA-B	P600
180	3KP64C-B	P600
181	3KP64CA-B	P600
182	3KP70C-B	P600
183	3KP70CA-B	P600
184	3KP75C-B	P600
185	3KP75CA-B	P600
186	3KP78C-B	P600
187	3KP78CA-B	P600
188	3KP85C-B	P600
189	3KP85CA-B	P600
190	3KP90C-B	P600
191	3KP90CA-B	P600
192	3KP100C-B	P600
193	3KP100CA-B	P600
194	3KP110C-B	P600
195	3KP110CA-B	P600
196	3KP120C-B	P600
197	3KP120CA-B	P600
198	3KP130C-B	P600
199	3KP130CA-B	P600
200	30KPA54	P600
201	30KPA54A	P600
202	30KPA58	P600
203	30KPA58A	P600
204	30KPA60	P600
205	30KPA60A	P600
206	30KPA64	P600
207	30KPA64A	P600
208	30KPA66	P600
209	30KPA66A	P600
210	30KPA70	P600
211	30KPA70A	P600
212	30KPA71	P600

43	P6SMB250A	DO-214AA
44	P6SMB250	DO-214AA
45	P6SMB300A	DO-214AA
46	P6SMB300	DO-214AA
47	SMBJ220C	DO-214AA
48	SMBJ220CA	DO-214AA
49	SMBJ250CA	DO-214AA
50	P6SMB250C	DO-214AA
51	P6SMB250CA	DO-214AA
52	P6SMB300C	DO-214AA
53	P6SMB300CA	DO-214AA
54	1KSMB10	DO-214AA
55	1KSMB10A	DO-214AA
56	1KSMB11	DO-214AA
57	1KSMB11A	DO-214AA
58	1KSMB12	DO-214AA
59	1KSMB12A	DO-214AA
60	1KSMB13	DO-214AA
61	1KSMB13A	DO-214AA
62	1KSMB15	DO-214AA
63	1KSMB15A	DO-214AA
64	1KSMB16	DO-214AA
65	1KSMB16A	DO-214AA
66	1KSMB18	DO-214AA
67	1KSMB18A	DO-214AA
68	1KSMB20	DO-214AA
69	1KSMB20A	DO-214AA
70	1KSMB22	DO-214AA
71	1KSMB22A	DO-214AA
72	1KSMB24	DO-214AA
73	1KSMB24A	DO-214AA
74	1KSMB27	DO-214AA
75	1KSMB27A	DO-214AA
76	1KSMB30	DO-214AA
77	1KSMB30A	DO-214AA
78	1KSMB33	DO-214AA
79	1KSMB33A	DO-214AA
80	1KSMB36	DO-214AA
81	1KSMB36A	DO-214AA
82	1KSMB39	DO-214AA
83	1KSMB39A	DO-214AA
84	1KSMB43	DO-214AA
85	1KSMB43A	DO-214AA

213	30KPA71A	P600
214	30KPA72	P600
215	30KPA72A	P600
216	30KPA75	P600
217	30KPA75A	P600
218	30KPA78	P600
219	30KPA78A	P600
220	30KPA84	P600
221	30KPA84A	P600
222	30KPA90	P600
223	30KPA90A	P600
224	30KPA96	P600
225	30KPA96A	P600
226	30KPA102	P600
227	30KPA102A	P600
228	30KPA108	P600
229	30KPA108A	P600
230	30KPA120	P600
231	30KPA120A	P600
232	30KPA132	P600
233	30KPA132A	P600
234	30KPA54-B	P600
235	30KPA54A-B	P600
236	30KPA58-B	P600
237	30KPA58A-B	P600
238	30KPA60-B	P600
239	30KPA60A-B	P600
240	30KPA64-B	P600
241	30KPA64A-B	P600
242	30KPA66-B	P600
243	30KPA66A-B	P600
244	30KPA70-B	P600
245	30KPA70A-B	P600
246	30KPA71-B	P600
247	30KPA71A-B	P600
248	30KPA72-B	P600
249	30KPA72A-B	P600
250	30KPA75-B	P600
251	30KPA75A-B	P600
252	30KPA78-B	P600
253	30KPA78A-B	P600
254	30KPA84-B	P600
255	30KPA84A-B	P600

86	1KSMB47	DO-214AA
87	1KSMB47A	DO-214AA
88	1KSMB51C	DO-214AA
89	1KSMB51CA	DO-214AA
90	1KSMB56C	DO-214AA
91	1KSMB56CA	DO-214AA
92	1KSMB62C	DO-214AA
93	1KSMB62CA	DO-214AA
94	1KSMB68C	DO-214AA
95	1KSMB68CA	DO-214AA
96	1KSMB75C	DO-214AA
97	1KSMB75CA	DO-214AA
98	1KSMB82C	DO-214AA
99	1KSMB82CA	DO-214AA
100	1KSMB91C	DO-214AA
101	1KSMB91CA	DO-214AA
102	1KSMB100C	DO-214AA
103	1KSMB100CA	DO-214AA
104	1KSMB110C	DO-214AA
105	1KSMB110CA	DO-214AA
106	1KSMB120C	DO-214AA
107	1KSMB120CA	DO-214AA
108	1KSMB130C	DO-214AA
109	1KSMB130CA	DO-214AA
110	1KSMB150C	DO-214AA
111	1KSMB150CA	DO-214AA
112	1KSMB160C	DO-214AA
113	1KSMB160CA	DO-214AA
114	1KSMB170CA	DO-214AA
115	1KSMB180CA	DO-214AA
116	1.5SMC160C	DO-214AB
117	1.5SMC160CA	DO-214AB
118	1.5SMC170C	DO-214AB
119	1.5SMC170CA	DO-214AB
120	1.5SMC180C	DO-214AB
121	1.5SMC180CA	DO-214AB
122	1.5SMC200C	DO-214AB
123	1.5SMC200CA	DO-214AB
124	SMCJ130C	DO-214AB
125	SMCJ130CA	DO-214AB
126	SMCJ150C	DO-214AB
127	SMCJ150CA	DO-214AB
128	SMCJ160C	DO-214AB

256	30KPA90-B	P600
257	30KPA90A-B	P600
258	30KPA96-B	P600
259	30KPA96A-B	P600
260	30KPA102-B	P600
261	30KPA102A-B	P600
262	30KPA108-B	P600
263	30KPA108A-B	P600
264	30KPA120-B	P600
265	30KPA120A-B	P600
266	30KPA132-B	P600
267	30KPA132A-B	P600
268	P4KE51C	DO-41
269	P4KE51CA	DO-41
270	P4KE56C	DO-41
271	P4KE56CA	DO-41
272	P4KE62C	DO-41
273	P4KE62CA	DO-41
274	P4KE68C	DO-41
275	P4KE68CA	DO-41
276	P4KE75C	DO-41
277	P4KE75CA	DO-41
278	P4KE82C	DO-41
279	P4KE82CA	DO-41
280	P4KE91C	DO-41
281	P4KE91CA	DO-41
282	P4KE100C	DO-41
283	P4KE100CA	DO-41
284	P4KE51C-B	DO-41
285	P4KE51CA-B	DO-41
286	P4KE56C-B	DO-41
287	P4KE56CA-B	DO-41
288	P4KE62C-B	DO-41
289	P4KE62CA-B	DO-41
290	P4KE68C-B	DO-41
291	P4KE68CA-B	DO-41
292	P4KE75C-B	DO-41
293	P4KE75CA-B	DO-41
294	P4KE82C-B	DO-41
295	P4KE82CA-B	DO-41
296	P4KE91C-B	DO-41
297	P4KE91CA-B	DO-41
298	P4KE100C-B	DO-41

129	SMCJ160CA	DO-214AB
130	SMCJ170C	DO-214AB
131	SMCJ170CA	DO-214AB
132	1.5SMC300	DO-214AB
133	1.5SMC300A	DO-214AB
134	1.5SMC300C	DO-214AB
135	1.5SMC300CA	DO-214AB
136	3KP45C	P600
137	3KP45CA	P600
138	3KP48C	P600
139	3KP48CA	P600
140	3KP51C	P600
141	3KP51CA	P600
142	3KP54C	P600
143	3KP54CA	P600
144	3KP58C	P600
145	3KP58CA	P600
146	3KP60C	P600
147	3KP60CA	P600
148	3KP64C	P600
149	3KP64CA	P600
150	3KP70C	P600
151	3KP70CA	P600
152	3KP75C	P600
153	3KP75CA	P600
154	3KP78C	P600
155	3KP78CA	P600
156	3KP85C	P600
157	3KP85CA	P600
158	3KP90C	P600
159	3KP90CA	P600
160	3KP100C	P600
161	3KP100CA	P600
162	3KP110C	P600
163	3KP110CA	P600
164	3KP120C	P600
165	3KP120CA	P600
166	3KP130C	P600
167	3KP130CA	P600
168	3KP45C-B	P600
169	3KP45CA-B	P600
170	3KP48C-B	P600

299	P4KE100CA-B	DO-41
300	P4KE300	DO-41
301	P4KE300A	DO-41
302	P4KE300-B	DO-41
303	P4KE300A-B	DO-41
304	P6KE300	DO-15
305	P6KE300A	DO-15
306	P6KE300-B	DO-15
307	P6KE300A-B	DO-15
308	SA110C	DO-15
309	SA110CA	DO-15
310	SA120C	DO-15
311	SA120CA	DO-15
312	SA130C	DO-15
313	SA130CA	DO-15
314	SA150C	DO-15
315	SA150CA	DO-15
316	SA160C	DO-15
317	SA160CA	DO-15
318	SA170C	DO-15
319	SA170CA	DO-15
320	SA180C	DO-15
321	SA180CA	DO-15
322	SA110C-B	DO-15
323	SA110CA-B	DO-15
324	SA120C-B	DO-15
325	SA120CA-B	DO-15
326	SA130C-B	DO-15
327	SA130CA-B	DO-15
328	SA150C-B	DO-15
329	SA150CA-B	DO-15
330	SA160C-B	DO-15
331	SA160CA-B	DO-15
332	SA170C-B	DO-15
333	SA170CA-B	DO-15
334	SA180C-B	DO-15
335	SA180CA-B	DO-15
336	SA180	DO-15
337	SA180A	DO-15
338	SA180-B	DO-15
339	SA180A-B	DO-15