8755 W. Higgins Road
Suite 500
Chicago, Illinois USA 60631

Apr 15th, 2019

RE: PCN # ESW490-32 -- TO-218 & TO92 & APAK Package Alternate Molding Compound for Thyristor and SIDACtor

To our valued customers,

Littelfuse would like to notify you of newly approved molding compound for all TO-218 & TO92 & APAK Package products for Thyristor and SIDACtor. The new molding compound are fully approved internally. This change does not affect UL certification of electrical isolation applied to TO218 isolated package under file # E71639.There are no changes to fit, form, and function of the finished product. Slightly color appearance changes only because of new compound.

Please see the attached documentation for change detail and affected part numbers.

All affected products have been fully qualified in accordance with established performance and reliability criteria. The attached pages summarize the qualification results. Full qualification data and/or samples will be available upon request.

Form, fit, function changes: None
Part number changes: None
Effective date: July 15th, 2019
Replacement products: N/A
Last time buy: N/A

This notification is for your information and acknowledgement. If you have any other questions or concerns, please contact your local sales team or Zhiwei Wang, Thyristor Product Manager, or Meng Wang SIDACtor Product Manager.

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

Best Regards,

Zhiwei Wang
Product Manager of Power Thyristor Discrete
Semiconductor Business Unit, Wuxi, China
+86 510 85277701 - 7927
zwang@littelfuse.com

Meng Wang
Product Manager of SIDACtor
Semiconductor Business Unit, Wuxi, China
+86 510 85277701 - 7955
mwang3@littelfuse.com

800 E. Northwest Highway Des Plaines, IL 60016

Product/Process Change Notice (PCN)

PCN#: ESW490-32 Date: Apr 15th, 2019

Product Identification:

All TO-218 & TO92 & APAK package products of Thyristor and SIDACtor

Implementation Date for Change:

July 15th, 2019

Contact Information

Name: Zhiwei Wang / Meng Wang

Title: Product Manager

Phone #: +86 510 85277701 - 7927 / 7955

Fax#: N/A

E-mail: zwang@littelfuse.com ; mwang3@littelfuse.com

Category of Change:

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

Description of Change:

Approve new molding compound for all TO-218 & TO92 & APAK package products of Thyristor and SIDACtor.

There are no changes to fit, form & function of the finished product. Slightly color appearance changes only because of new compound.

The affected products have been fully qualified in accordance with all establishe criteria for performance and reliability

All relevant detail is included in the supplemental pages..

Important Dates:

☒ Qualification Samples Available: Apr 15th, 2019, sample available upon request ☐ Last Time Buy:

☒ Final Qualification Data Available: Apr 15th, 2019

☐ Date of Final Product Shipment:

Method of Distinguishing Changed Product

☐ Product Mark,

☒ Date Code, Traceability data available upon request

☐ Other,

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

N/A

LF Qualification Plan/Results:

Attached….. full detail available upon request

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

Prepared By : Maggie Xu, Senior Product Engineer
Date : March 1st, 2019
Device : TO218/TO92/APAK Package Product
Revision : A

1.0 Objective:

The purpose of this project is to qualify new molding compound as 2nd source compound materials for Littelfuse TO218, TO92 and APAK Products.

2.0 Applicable Devices:

Thyristor TO218 and TO92 Product Series
SIDACtor TO218, TO92 and APAK Product Series

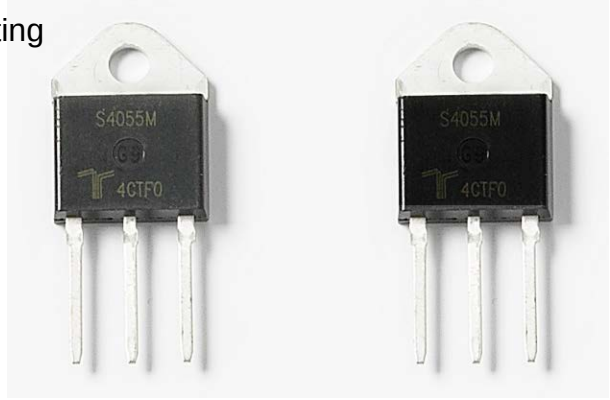
3.0 Packing Method:

There will be no changes in the packing method.

4.0 Physical Differences/Changes:

Product appearance and laser marking appearance is changed.

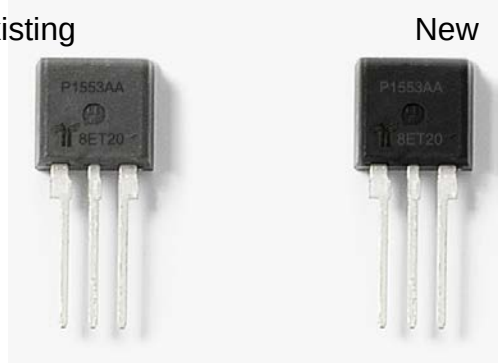
Existing



New

FIG 1. TO218 Package Product Appearance

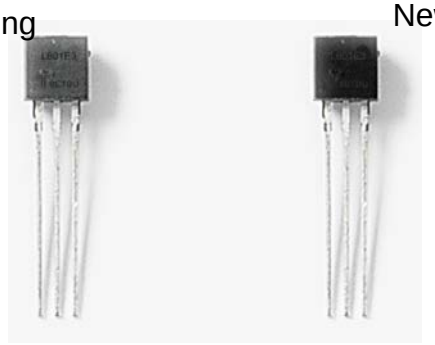
Existing



New

FIG 2. APAK Package Product appearance

Existing



New

FIG 3. TO92 Package Product appearance

5.0 Reliability Test Results Summary:

5.1 Thyristor reliability test result

Test Category	Description	Sample P/N	Sample Qty	Littelfuse test Ref#	Contents/Conditions	Result Summary
Parametric Test	Electrical Parameters	QK040K7	348	103252	$I_{GT}/V_{GT}/I_H/I_{DRM}/I_{RRM}$	Meet datasheet spec
		Q6025K6	348	103252		
		S6065K	348	103252		
	High Temperature leakage test	QK040K7	15	103257	T_J, AC Peak 100%V_{DRM} applied	
		Q6025K6	15	103257		
		S6065K	15	103257		
	ITSM	QK040K7	5	103257	Full cycle, f = 50Hz;	
		Q6025K6	5	103257		
		S6065K	5	103257	Single half cycle; f = 50Hz;	
	Isolation Test	QK040K7	25	103257	2500V, 1mins	
		Q6025K6	25	103257		
		S6065K	25	103257		
	Thermal Resistance	QK040K7	5	103258	Per Spec	
		Q6025K6	5	103258		
		S6065K	5	103258		
Reliability Test	AC Blocking (HTRB)	QK040K7	77	103252	T_J, 1,008hr, Reverse biased at peak AC voltage	no failure at 1,008hr read point
		Q6025K6	77	103252		
		S6065K	77	103252		
	High Humidity High Temp. Reverse Bias (H^3TRB)	QK040K7	77	103252	Ta: 85°C, RH: 85%, 1,008hr, Reverse biased at 160V_{DC}	no failure at 1,008 hr read point
		Q6025K6	77	103252		
		S6065K	77	103252		
	Temperature Cycling (TC)	QK040K7	77	103252	-55℃&150℃ (air to air), Dwell time 15mins,1000 cycles	0 failure at 1000 cycle read point
		Q6025K6	77	103252		
		S6065K	77	103252		
	Unbiased Highly Accelerated Stress Test (UHAST)	QK040K7	77	103252	130°C/85%RH.	no failure at 96hr read point
		Q6025K6	77	103252		
		S6065K	77	103252		
	Resistance to Solder Heat (RSH)	QK040K7	30	103252	260°C, 10 seconds	0% failure after RSH
		Q6025K6	30	103252		
		S6065K	30	103252		
	Solderability	QK040K7	10	103252	245°C, 5 seconds	Meet standard requirement
		Q6025K6	10	103252		
		S6065K	10	103252		

Test Category	Description	Sample P/N	Sample Qty	Littelfuse test Ref#	Contents/Conditions	Result Summary
Parametric Test	Electrical Parameters	L601E3	348	113689	$I_{GT}/V_{GT}/I_H/I_{DRM}/I_{RRM}$	Meet datasheet spec
		EC103M1	348	113687		
		S603EC103D	348	113690		
		K2400E70	348	113691		
	High Temperature leakage test	L601E3	15	113689	T_J, AC Peak 100%V_{DRM} applied	
		EC103M1	15	113687		
		S603EC103D	15	113690		
		K2400E70	15	113691		
	ITSM	L601E3	5	113694	Full cycle, f = 50Hz	
		K2400E70	5	113697		
		EC103M1	5	113694	Single wave, f = 50Hz	
		S603EC103D	5	113694		
	Thermal Resistance	L601E3	5	113699	Per spec	
		EC103M1	5	113699		
		S603EC103D	5	113699		
Reliability Test	AC Blocking (HTRB)	L601E3	77	113689	T_J, 1,008hr, Reverse biased at peak AC voltage	no failure at 1,008hr read point
		EC103M1	77	113687		
		S603EC103D	77	113690		
		K2400E70	77	113691		
	High Humidity High Temp. Reverse Bias (H^3TRB)	L601E3	77	113689	Ta: 85°C, RH: 85%, 1,008hr, Reverse biased at 160V_{DC}	no failure at 1,008 hr read point
		EC103M1	77	113687		
		S603EC103D	77	113690		
		K2400E70	77	113691		
	Temperature Cycling (TC)	L601E3	77	113689	-55 &150℃ (air to air), Dwell time 15mins,1000 cycles	0 failure at 1000 cycle read point
		EC103M1	77	113687		
		S603EC103D	77	113690		
		K2400E70	77	113691		
	Unbiased Highly Accelerated Stress Test (UHAST)	L601E3	77	113689	130°C/85%RH	no failure at 96hr read point
		EC103M1	77	113687		
		S603EC103D	77	113690		
		K2400E70	77	113691		
	Resistance to Solder Heat (RSH)	L601E3	30	113689	260°C, 10 seconds	0% failure after RSH
		EC103M1	30	113687		
		S603EC103D	30	113690		
		K2400E70	30	113691		
	Solderability	L601E3	10	113689	245°C, 5 seconds	Meet standard requirement
		EC103M1	10	113687		
		S603EC103D	10	113690		
		K2400E70	10	113691		

5.2 SIDACtor reliability test result

Test Category	Description	Sample P/N	Sample Qty	Littelfuse test Ref#	Contents/Conditions	Result Summary
Parametric Test	Electrical Parameters	P1553AAL	197	113200	$V_{BO}/V_{DRM}/I_H/V_T$	Meet datasheet spec
		P1602ACL	197	113202		
		P0720ECL	197	113201		
		P2300MEL	197	103789		
Reliability Test	DC Blocking (HTRB)	P1553AAL	77	113200	125℃, 24h at +/- 80%Vdrm, AC blocking test with AC peak 80% Vdrm	no failure at 1,008hr read point
		P1602ACL	77	113202		
		P0720ECL	77	113201		
		P2300MEL	77	103789		
	High Humidity High Temp. Reverse Bias (H^3TRB)	P1553AAL	40	113200	Ta: 85°C, RH: 85%, 1,008hr, Reverse biased at 80% V_{DRM} not exceed 52V	no failure at 1,008 hr read point
		P1602ACL	40	113202		
		P0720ECL	40	113201		
		P2300MEL	40	103789		
	Temperature Cycling (TC)	P1553AAL	40	113200	-55℃&150℃ (air to air), Dwell time 15mins,1000 cycles	0 failure at 1000 cycle read point
		P1602ACL	40	113202		
		P0720ECL	40	113201		
		P2300MEL	40	103789		
	Unbiased Highly Accelerated Stress Test (UHAST)	P1553AAL	40	113200	130°C/85%RH	no failure at 96hr read point
		P1602ACL	40	113202		
		P0720ECL	40	113201		
		P2300MEL	40	103789		

6.0 Electrical Characteristic Summary:

There is no change in electrical characteristics.

7.0 Changed Part Identification:

NA

8.0 Recommendations & Conclusions:

Based on the test results, it is determined that the new epoxy molding compounds are qualified and certified for Littelfuse TO218, TO92 and APAK Product Series.

9.0 Approvals:

Maggie Xu
Thyristor Product Engineer
Littelfuse, Inc.

Sewall Wang
Product Engineer Manager
Littelfuse, Inc.

10.0 Appendix I – Thyristor Affected part number list

K0900E70	K2200EH70AP	HQ6025KH5TP	QJ6025JH6TP	S8065KTP
K0900E70AP	K2200EH70RP2	Q1205Q6040K9TP	QJ6025KH6TP	S816S4035KLBTP
K0900E70RP2	K2200EH70RP3	Q1249Q4040J7TP	QK025K6TP	S985S6065KLBTP
K0900E70RP3	K237K1500E70	Q1258Q4040K7TP	QK040K7TP	S986RP
K101K1200E70	K239K2400E70	Q1318AQ6025K6TP	QK040KH6TP	SK035KTP
K1050E70	K2400E70	Q1318Q4025K6TP	S4035J81TP	SK065KTP
K1050E70AP	K2400E70AP	Q1331Q8040K7TP	S4035JTP	S4055M81TP
K1050E70RP2	K2400E70RP2	Q1340Q4040K7TP	S4035KTP	S4055MTP
K1050E70RP3	K2400E70RP3	Q1363Q6025K6TP	S4065JTP	S4055W81TP
K1100E70	K2400EH70	Q1367Q6040K7LBTP	S4065KTP	S4055W82TP
K1100E70AP	K2400EH70AP	Q1402Q8040K7LBTP	S6035JTP	S4055WTP
K1100E70RP2	K2400EH70RP2	Q1405HQ6025KH5TP	S6035KTP	S4070W81TP
K1100E70RP3	K2400EH70RP3	Q1411Q8040K7TP	S6065J81TP	S4070WTP
K1200E70	K245K1500E70	Q1412QK040K7LBTP	S6065JTP	S487S1070WLBTP
K1200E70AP	K2500E70	Q1424Q8040K4TP	S6065K81TP	S6055MTP
K1200E70RP2	K2500E70AP	Q1426Q8040K5TP	S6065KTP	S6055WTP
K1200E70RP3	K2500E70RP2	Q4025J681TP	S703S2040KTP	S6070WTP
K121K1300E70	K2500E70RP3	Q4025J6TP	S8035JTP	S727S8055MTP
K1300E70	K2500EH70	Q4025K6TP	S8035KTP	S8055MTP
K1300E70AP	K2500EH70AP	Q4040J7TP	S8065JTP	S8055WTP
K1300E70RP2	K2500EH70RP2	Q4040JH6TP		S8070WTP
K1300E70RP3	K2500EH70RP3	Q4040K5TP		S838
K1400E70	K266K1300E70	Q4040K7TP		S868S4055MLBTP
K1400E70AP	K266K1300E70AP	Q4040KH6TP		SK055MTP
K1400E70RP2	K276K1400E70	Q6025J681TP		
K1400E70RP3	K304K1500E70AP	Q6025J6TP		
K143K1050E70	K304K1500E70RP2	Q6025K681TP		
K1500E70	K317K2000E70	Q6025K6TP		
K1500E70AP	K324K1500E70RP2	Q6040J781TP		
K1500E70RP2		Q6040J7TP		
K1500E70RP3		Q6040JH6TP		
K155K1300E70		Q6040K4TP		
K2000E70		Q6040K5TP		
K2000E70AP		Q6040K781TP		
K2000E70RP2		Q6040K7TP		
K2000E70RP3		Q6040KH6TP		
K2000EH70		Q8025J6TP		
K2000EH70AP		Q8025K6TP		
K2000EH70RP2		Q8040J7TP		
K2000EH70RP3		Q8040JH6TP		
K214K1200E70		Q8040K3TP		
K214K1200E70AP		Q8040K4TP		
K2200E70		Q8040K5TP		
K2200E70AP		Q8040K7TP		
K2200E70RP2		Q8040KH6TP		
K2200E70RP3		QJ4025JH6TP		
K2200EH70		QJ4025KH6TP		

2N6565	L4X8E6AP	Q4X8E4	S730S401ERP
2N6565AP	L4X8E6RP	Q4X8E4AP	S733EC103MRP
2N6565RP	L4X8E8	Q4X8E4RP	S739TCR22-6
CQ100Q401E3	L4X8E8AP	Q601E3	S747EC103A2
EC103D	L4X8E8RP	Q601E3AP	S763EC103M
EC103D1	L601E3	Q601E3RP	S776TCR22-6
EC103D1AP	L601E3AP	Q601E4	S776TCR22-6RP
EC103D1RP	L601E3RP	Q601E4AP	S793ATCR22-8RP
EC103D2	L601E5	Q601E4RP	S793BTCR22-8RP
EC103D2AP	L601E5AP	Q6X8E3	S793CTCR22-8RP
EC103D2RP	L601E5RP	Q6X8E3AP	S804EC103MRP
EC103D3	L601E6	Q6X8E3RP	S806S601E
EC103D3AP	L601E6AP	Q6X8E4	S812BEC103D2RP
EC103D3RP	L601E6RP	Q6X8E4AP	S822EC103E2RP
EC103DAP	L601E8	Q6X8E4RP	S823EC103D2
EC103DRP	L601E8AP	Q781Q401E4RP	S833TCR22-8RP
EC103M	L601E8RP	S128EC103A2	S852EC103D2RP
EC103M1	L6X8E3	S257EC103BRP	S864EC103D1RP
EC103M1AP	L6X8E3AP	S281EC103A	S880EC103M2
EC103M1RP	L6X8E3RP	S347S101E	S881EC103D3
EC103M2	L6X8E5	S401E	S882ATCR22-8RP
EC103M2AP	L6X8E5AP	S401EAP	S882TCR22-8
EC103M2RP	L6X8E5RP	S401ERP	S882TCR22-8LBRP
EC103M3	L6X8E6	S405EC103BLB	S882TCR22-8RP
EC103M3AP	L6X8E6AP	S503AEC103E1RP	S884S401E
EC103M3RP	L6X8E6RP	S511EC103C3	S884S401ERP
EC103MAP	L6X8E8	S595S601E	S933EC103D
EC103MRP	L6X8E8AP	S596S601E	S999EC103D2
L401E3	L6X8E8RP	S601E	TCR22-6
L401E3AP	Q1027Q201E4	S601EAP	TCR22-6AP
L401E3RP	Q1046L401E5	S601ERP	TCR22-6RP
L401E5	Q1058Q401E4	S606EC103M2	TCR22-8
L401E5AP	Q1117L601E3RP	S606EC103M2RP	TCR22-8AP
L401E5RP	Q1168L401E3	S607EC103DAP	TCR22-8RP
L401E6	Q1261L601E3	S607EC103DRP	
L401E6AP	Q1279Q4X8E4RP	S611TCR22-8	
L401E6RP	Q1364L601E6	S6172N5064	
L401E8	Q401E3	S624AEC103D1	
L401E8AP	Q401E3AP	S624BEC103D1	
L401E8RP	Q401E3RP	S624CEC103D1	
L4X8E3	Q401E4	S650EC103D2	
L4X8E3AP	Q401E4AP	S680EC103D3RP	
L4X8E3RP	Q401E4RP	S696EC103DLB	
L4X8E5	Q455Q401E4	S712EC103B3	
L4X8E5AP	Q4X8E3	S715EC103M2	
L4X8E5RP	Q4X8E3AP	S716EC103M	
L4X8E6	Q4X8E3RP	S728EC103E	

11.0 Appendix II – SIDACtor Affected part number list

P1500MEL	P0080EAL	P0300EBMCLRP2	P0900EBLRP1	P1500EBL
P1900MEL	P0080EALAP	P0300ECL	P0900EBLRP2	P1500EBLAP
P2300MEL	P0080EALRP1	P0300ECLAP	P0900ECL	P1500EBLRP1
P3800MEL	P0080EALRP2	P0300ECLRP1	P0900ECLAP	P1500EBLRP2
P4800MEL	P0080EAMCL	P0300ECLRP2	P0900ECLRP1	P1500ECL
P595P2300MEL	P0080EAMCLAP	P0300ECMCL	P0900ECLRP2	P1500ECLAP
P845P1900MEL	P0080EAMCLRP1	P0300ECMCLAP	P0900ECMCL	P1500ECLRP1
P870P3800MEL	P0080EAMCLRP2	P0300ECMCLRP1	P0900ECMCLAP	P1500ECLRP2
P589	P0080EBL	P0300ECMCLRP2	P0900ECMCLRP1	P1500ECMCL
P233P3100EBRP	P0080EBLAP	P0640EAL	P0900ECMCLRP2	P1500ECMCLAP
P235LP3100EA	P0080EBLRP1	P0640EALAP	P1100EAL	P1500ECMCLRP1
P235P3100EA	P0080EBLRP2	P0640EALRP1	P1100EALAP	P1500ECMCLRP2
P252AP2300EC	P0080EBMCL	P0640EALRP2	P1100EALRP1	P1800EAL
P252AP2300ECRP	P0080EBMCLAP	P0640EBL	P1100EALRP2	P1800EALAP
P2600EAL	P0080EBMCLRP1	P0640EBLAP	P1100EBL	P1800EALRP1
P2600EALAP	P0080EBMCLRP2	P0640EBLRP1	P1100EBLAP	P1800EALRP2
P2600EALRP1	P0080ECL	P0640EBLRP2	P1100EBLRP1	P1800EBL
P2600EALRP2	P0080ECLAP	P0640ECL	P1100EBLRP2	P1800EBLAP
P2600EBL	P0080ECLRP1	P0640ECLAP	P1100ECL	P1800EBLRP1
P2600EBLAP	P0080ECLRP2	P0640ECLRP1	P1100ECLAP	P1800EBLRP2
P2600EBLRP1	P0080ECMCL	P0640ECLRP2	P1100ECLRP1	P1800ECL
	P0080ECMCLAP	P0640ECMCL	P1100ECLRP2	P1800ECLAP
	P0080ECMCLRP1	P0640ECMCLAP	P1100ECMCL	P1800ECLRP1
	P0080ECMCLRP2	P0640ECMCLRP1	P1100ECMCLAP	P1800ECLRP2
	P0220ECL	P0640ECMCLRP2	P1100ECMCLRP1	P1800ECMCL
	P0220ECLAP	P0720EAL	P1100ECMCLRP2	P1800ECMCLAP
	P0220ECLRP1	P0720EALAP	P1300EAL	P1800ECMCLRP1
	P0220ECLRP2	P0720EALRP1	P1300EALAP	P1800ECMCLRP2
	P0220ECMCL	P0720EALRP2	P1300EALRP1	P2300EAL
	P0220ECMCLAP	P0720EBL	P1300EALRP2	P2300EALAP
	P0220ECMCLRP1	P0720EBLAP	P1300EBL	P2300EALRP1
	P0220ECMCLRP2	P0720EBLRP1	P1300EBLAP	P2300EALRP2
	P0300EAL	P0720EBLRP2	P1300EBLRP1	P2300EBL
	P0300EALAP	P0720ECL	P1300EBLRP2	P2300EBLAP
	P0300EALRP1	P0720ECLAP	P1300ECL	P2300EBLRP1
	P0300EALRP2	P0720ECLRP1	P1300ECLAP	P2300EBLRP2
	P0300EAMCL	P0720ECLRP2	P1300ECLRP1	P2300ECL
	P0300EAMCLAP	P0720ECMCL	P1300ECLRP2	P2300ECLAP
	P0300EAMCLRP1	P0720ECMCLAP	P1300ECMCL	P2300ECLRP1
	P0300EAMCLRP2	P0720ECMCLRP1	P1300ECMCLAP	P2300ECLRP2
	P0300EBL	P0720ECMCLRP2	P1300ECMCLRP1	P2300ECMCL
	P0300EBLAP	P0900EAL	P1300ECMCLRP2	P2300ECMCLAP
	P0300EBLRP1	P0900EALAP	P146BP0720EARP	P2300ECMCLRP1
	P0300EBLRP2	P0900EALRP1	P1500EAL	P2300ECMCLRP2
	P0300EBMCL	P0900EALRP2	P1500EALAP	P233P3100EBL
	P0300EBMCLAP	P0900EBL	P1500EALRP1	P233P3100EBLAP
	P0300EBMCLRP1	P0900EBLAP	P1500EALRP2	P233P3100EBLRP

A2106AC3L	P2103AAL	P2703ACMCLRP	P4202ABL
P0602AAL	P2103AALRP	P276P2353AARP	P4202ABLRP
P0602AAL60	P2103ABL	P281P2103AB	P4202ACL
P0602ABL	P2103ABL60	P3002AAL	P4202ACLRP
P0602ABL60	P2103ABLRP	P3002AALRP	P4202ACMCL
P0602ACL	P2103ACL	P3002ABL	P4202ACMCLRP
P0602ACL60	P2103ACL60	P3002ABL60	P451P1602ACL
P0602ACLRP	P2103ACLRP	P3002ABL62	P451P1602ACLRP
P0602ACMCL	P2103ACMCL	P3002ABLRP	P474P4802AB
P1402AAL	P2202AAL	P3002ACL	
P1402AALRP	P2202AALRP	P3002ACLRP	
P1402ABL	P2202ABL	P3002ACMCL	
P1402ABL60	P2202ABL60	P318AP3203AC	
P1402ABLRP	P2202ABLRP	P318P3203AB	
P1402ACL	P2202ACL	P3203AAL	
P1402ACLRP	P2202ACL60	P3203AAL60	
P1402ACMCL	P2202ACLRP	P3203AALRP	
P1553AAL	P2202ACMCL	P3203ABL	
P1553AAL60	P228P6002AB	P3203ABL60	
P1553AALRP	P2353AAL	P3203ABLRP	
P1553ABL	P2353AAL60	P3203ACL	
P1553ABL60	P2353AALRP	P3203ACL60	
P1553ABLRP	P2353ABL	P3203ACLRP	
P1553ACL	P2353ABL60	P3203ACMCL	
P1553ACL60	P2353ABLRP	P3203ACMCLRP	
P1553ACLRP	P2353ACL	P3403AAL	
P1553ACMCL	P2353ACLRP	P3403AALRP	
P1602AAL	P2353ACMCL	P3403ABL	
P1602AAL60	P2353ACMCLRP	P3403ABL60	
P1602AALRP	P251P1602ABL	P3403ABLRP	
P1602ABL	P2702AAL	P3403ACL	
P1602ABL60	P2702AALRP	P3403ACL60	
P1602ABLRP	P2702ABL	P3403ACLRP	
P1602ACL	P2702ABLRP	P3403ACMCL	
P1602ACL60	P2702ACL	P3403ACMCLRP	
P1602ACLRP	P2702ACLRP	P3602AAL	
P1602ACMCL	P2702ACMCL	P3602AALRP	
P1803AAL	P2703AAL	P3602ABL	
P1803AALRP	P2703AAL60	P3602ABL60	
P1803ABL	P2703AALRP	P3602ABLRP	
P1803ABL60	P2703ABL	P3602ACL	
P1803ABLRP	P2703ABL60	P3602ACLRP	
P1803ACL	P2703ABLRP	P3602ACMCL	
P1803ACLRP	P2703ACL	P378AP6002ACL	
P1803ACMCL	P2703ACL60	P417P3403AB	
P1803ACMCLRP	P2703ACLRP	P4202AAL	
P196P3002AB61	P2703ACMCL	P4202AALRP	