



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

May 10th, 2024

PCN # ESW490-58 – Alternative Epoxy Molding Compound for IXYS Brand Thyristor & Diode Discrete Packages

To our valued customers,

Littelfuse would like to notify you that we have qualified alternative Epoxy Molding Compound (EMC) material for various IXYS Brand Thyristor & Diode Discrete Packages to serve the Business Continuity Plan (BCP).

Package types includes : TO-262, TO-3P, TO-247, SOT227, TO-268, TO-263, TO-220.

All affected IXYS Brand Thyristor & Diode Discrete products have been fully qualified in accordance with established performance and reliability criteria using alternative EMC. The attached pages summarized the qualification results. Full qualification data and/or samples will be available upon request.

Pls refer to attached product list in the last pages for detail affected product coverage.

Form, fit, function changes: No Fit/Form/Function change with alternative EMC.
Part number changes: None
Effective date: August 10th, 2024
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, Senior Product Marketing Manager of Power Bipolar Discrete.

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

Thank you very much!

Best Regards,

Zhiwei Wang

Zhiwei Wang
Senior Product Marketing Manager of Power Bipolar Discrete
Semiconductor Business Unit - Littelfuse
zwang@littelfuse.com



800 E. Northwest Highway Des Plaines, IL 60016

Product/Process Change Notice (PCN)

PCN#: ESW490-58 **Date:** May 10th, 2024

Product Identification:

IXYS Brand Thyristor & Diode Discrete Packages
Products

Implementation Date for Change:

August 10th , 2024

Contact Information

Name: Zhiwei Wang

Title: Senior Product Marketing Manager

Phone #: N/A

Fax#: N/A

E-mail: zwang@littelfuse.com

Category of Change:

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

Description of Change:

Littelfuse would like to notify you that we have qualified alternative Epoxy Mold Compound (EMC) material for various IXYS Brand Thyristor & Diode Discrete Packages to serve the Business Continuity Plan (BCP).

Form, fit, function changes: No Fit/Form/Function change with alternative EMC

Part number changes: None

Effective date: August 10th, 2024

Replacement products: N/A

Last time buy: N/A

Important Dates:

☒ Qualification Samples Available:

☐ Last Time Buy:

☒ Final Qualification Data Available:

☐ Date of Final Product Shipment:

Method of Distinguishing Changed Product

- ☐ Product Mark,
- ☒ Date Code, Upon Request
- ☐ Other,

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

No Fit/Form/Function change with alternative EMC.

LF Qualification Plan/Results:

Pass and 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

Prepared By : Zhiwei Wang, Senior Product Marketing Manager
Date : May 10th, 2024
Products : IXYS Brand Thyristor & Diode Discrete Packages Products
Revision : A

1.0 Objective:

This qualification report covers IXYS Brand Thyristor & Diode Discrete Packages Products Alternative Epoxy Molding Compound (EMC) material.

2.0 Applicable Products:

TO-262, TO-3P, TO-247, SOT227, TO-268, TO-263, TO-220 Package Products. Refer to Appendix A for a detailed part number list.

3.0 Physical Differences/Changes:

No Change

4.0 Comparison of Package outline dimensions specifications

No change

5.0 Qualification Test Result

All samples passed parametric and reliability test standard by Littelfuse.

PACKAGE	DEVICE	REL-TEST	CONDITIONS	SAMPLE SIZE PER LOT	STATUS	RESULT
TO-262	DNA30ER2200IY	TC	100 cycles. -55/+150°C	20	Finished	Completed: Passed reliability
		HTRB	1000hrs, 1540V, half sine, AC, 150°C	20	Finished	Completed: Passed reliability
		uHAST	96hrs, 130°C, 85%r.H.	20	Finished	Completed: Passed reliability
TO-247	CLA50E1200HB DSEI120-12A IX45IF1200HB	TC	100 cycles. -40/+150°C	20	Finished	Completed: Passed reliability
		HTRB	1000hrs	20	Finished	Completed: Passed reliability
		H3TRB	1000hrs, 85°C, 85%r.H.	20	Finished	Completed: Passed reliability
		uHAST	96hrs, 130°C, 85%r.H.	20	Finished	Completed: Passed reliability
TO-268	CLA100E1200TZ DLA100IM1200TZ IXG100I800ATZ	TC	100 cycles. -40/+150°C	20	Finished	Completed: Passed reliability
		HTRB	1000hrs	20	Finished	Completed: Passed reliability
		H3TRB	1000hrs, 85°C, 85%r.H.	20	Finished	Completed: Passed reliability
		uHAST	96hrs, 130°C, 85%r.H.	20	Finished	Completed: Passed reliability

		MSL1	168hrs, 85°C, 85%r.H.	11	Finished	Completed: Passed reliability
		MSL3	192hrs, 30°C, 60%r.H.	11	Finished	Completed: Passed reliability
TO-263	DMA30IM1600PZ IXA20I1200PZ	TC	100 cycles. -40/+150°C	20	Finished	Completed: Passed reliability
		HTRB	1000hrs	20	Finished	Completed: Passed reliability
		H3TRB	1000hrs, 85°C, 85%r.H.	20	Finished	Completed: Passed reliability
		uHAST	96hrs, 130°C, 85%r.H.	20	Finished	Completed: Passed reliability
		MSL1	168hrs, 85°C, 85%r.H.	11	Finished	Completed: Passed reliability
		MSL3	192hrs, 30°C, 60%r.H.	11	Finished	Completed: Passed reliability
TO-220	IXA20I1200PB DSI30-08_16A CLA30E1200PB	TC	100 cycles. -40/+150°C	20	Finished	Completed: Passed reliability
		HTRB	1000hrs	20	Finished	Completed: Passed reliability
		H3TRB	1000hrs, 85°C, 85%r.H.	20	Finished	Completed: Passed reliability
		uHAST	96hrs, 130°C, 85%r.H.	20	Finished	Completed: Passed reliability
TO-3P	DPG120C300QB DSA120C150QB	TC	100 cycles. -55/+150°C	20	Finished	Completed: Passed reliability
		HTRB	1000hrs	20	Finished	Completed: Passed reliability
SOT-227	DSEI101-12A	TC	100 cycles. -40/+150°C	20	Finished	Completed: Passed reliability
		HTRB	1000hrs	20	Finished	Completed: Passed reliability
		Humidity	96hrs, 121°C, 100% r.H.	20	Finished	Completed: Passed reliability

6.0 Recommendations & Conclusions:

Based on the above qualification test results, Littelfuse judged that alternative EMC can pass the release criterion and ready to start mass production for affected products.

Appendix A: Detail Part Number list affected.

ELEC Family	Package Type	Part Number
POWER DIODE DISCRETE	SOT-227	DSEI2X101-12A
POWER DIODE DISCRETE	SOT-227	DSEI2X61-12B
POWER DIODE DISCRETE	SOT-227	DSEI2X101-06A
POWER DIODE DISCRETE	SOT-227	DMA100A1600NB
POWER DIODE DISCRETE	SOT-227	DH2X61-18A
POWER DIODE DISCRETE	SOT-227	VBE60-06A
POWER DIODE DISCRETE	SOT-227	DSEI2X121-02Y

POWER DIODE DISCRETE	SOT-227	DSEP2X25-12C
POWER DIODE DISCRETE	SOT-227	DSI2X55-16A
POWER DIODE DISCRETE	SOT-227	DFE250X600NA
POWER DIODE DISCRETE	SOT-227	DSEI2X61-06C
POWER DIODE DISCRETE	SOT-227	DSEI2X121-02A
POWER DIODE DISCRETE	SOT-227	DSS2X101-015A
POWER DIODE DISCRETE	SOT-227	DSEI2X61-10B
POWER DIODE DISCRETE	SOT-227	VBO40-08NO6

POWER DIODE DISCRETE	SOT-227	DSEP2X61-06A
POWER DIODE DISCRETE	SOT-227	DSEP2X101-04A
POWER DIODE DISCRETE	SOT-227	DMA240YA1600NA
POWER DIODE DISCRETE	SOT-227	DMA240YC1600NA
POWER DIODE DISCRETE	SOT-227	DSI2X55-12A
POWER DIODE DISCRETE	SOT-227	DSS2X101-02A
POWER DIODE DISCRETE	SOT-227	DSEP2X91-03A
POWER DIODE DISCRETE	SOT-227	DMA150E1600NA
POWER DIODE DISCRETE	SOT-227	DMA150YA1600NA
POWER DIODE DISCRETE	SOT-227	DMA150YC1600NA
POWER DIODE DISCRETE	SOT-227	DSEI2X31-12B
POWER DIODE DISCRETE	SOT-227	DSS2X61-01A
POWER DIODE DISCRETE	SOT-227	DSEI2X30-06C
POWER DIODE DISCRETE	SOT-227	DSEC240-04A
POWER DIODE DISCRETE	SOT-227	DSS2X160-01A
POWER DIODE DISCRETE	SOT-227	VBO40-12NO6
POWER DIODE DISCRETE	SOT-227	DSEP2X31-12A
POWER DIODE DISCRETE	SOT-227	DSEP2X91-06A
POWER DIODE DISCRETE	SOT-227	DSEI2X31-06C
POWER DIODE DISCRETE	SOT-227	DSEP2X61-12A
POWER DIODE DISCRETE	SOT-227	DSEP2X31-06B
POWER DIODE DISCRETE	SOT-227	DPF240X400NA
POWER DIODE DISCRETE	SOT-227	DSS2X121-0045B
POWER DIODE DISCRETE	SOT-227	DSS2X111-008A
POWER DIODE DISCRETE	SOT-227	DSEP2X61-03A
POWER DIODE DISCRETE	SOT-227	DSEP2X31-06A
POWER DIODE DISCRETE	SOT-227	DHG100X1200NA
POWER DIODE DISCRETE	SOT-227	DPF240X200NA
POWER DIODE DISCRETE	SOT-227	DPJ50XS1800NA
POWER DIODE DISCRETE	SOT-227	DSEI2X61-04C
POWER DIODE DISCRETE	SOT-227	DSEP2X60-12A
POWER DIODE DISCRETE	SOT-227	VBE60-12A
POWER DIODE DISCRETE	SOT-227	DSEI2X61-02A
POWER DIODE DISCRETE	SOT-227	DSS2X41-01A
POWER DIODE DISCRETE	SOT-227	DMA200X1600NA
POWER DIODE DISCRETE	SOT-227	DSEI2X31-10B
POWER DIODE DISCRETE	SOT-227	DSA240X200NA
POWER DIODE DISCRETE	SOT-227	DSEP2X31-03A
POWER DIODE DISCRETE	SOT-227	DSEI2X30-04C
POWER DIODE DISCRETE	SOT-227	DMA200XA1600NA
POWER DIODE DISCRETE	SOT-227	DSEI2X30-12B

POWER DIODE DISCRETE	SOT-227	DSEI2X101-12A-REG
POWER DIODE DISCRETE	SOT-227	VBO40-16NO6
POWER DIODE DISCRETE	SOT-227	DSS2X61-0045A
POWER DIODE DISCRETE	SOT-227	DH2X60-18A
POWER DIODE DISCRETE	SOT-227	DAA200XA1800NA
POWER DIODE DISCRETE	SOT-227	DNA90YA2200NA
POWER DIODE DISCRETE	SOT-227	DFE240X600NA
POWER DIODE DISCRETE	SOT-227	DNA90YC2200NA
POWER DIODE DISCRETE	SOT-227	DSEI2X30-10B
POWER DIODE DISCRETE	SOT-227	DSEC240-06A
POWER DIODE DISCRETE	SOT-227	DSS2X81-0045B
POWER DIODE DISCRETE	SOT-227	DAA200X1800NA
POWER DIODE DISCRETE	SOT-227	DHG50X1200NA
POWER DIODE DISCRETE	SOT-227	DSEI2X31-04C
POWER DIODE DISCRETE	SOT-227	DSEI2X60-04C
POWER DIODE DISCRETE	SOT-227	DSA240X150NA
POWER DIODE DISCRETE	SOT-227	DSS2X160-0045A
POWER DIODE DISCRETE	SOT-227	DHG100X600NA
POWER DIODE DISCRETE	SOT-227	DHG50X650NA
POWER DIODE DISCRETE	SOT-227	DMA200YA1600NA
POWER DIODE DISCRETE	SOT-227	DMA200YC1600NA
POWER DIODE DISCRETE	SOT-227	DSA320A100NB
POWER DIODE DISCRETE	SOT-227	DSEK300-06A
POWER DIODE DISCRETE	SOT-227	DSEI 2X61-10B
POWER DIODE DISCRETE	SOT-227	DSEI 2X101-12A
POWER DIODE DISCRETE	SOT-227	DSEI 2X101-06A
POWER THYRISTOR DISCRETE	SOT-227	MCO150-12IO1
POWER THYRISTOR DISCRETE	SOT-227	MMO74-12IO6
POWER THYRISTOR DISCRETE	SOT-227	CMA80PD1600NA
POWER THYRISTOR DISCRETE	SOT-227	MMO74-16IO6
POWER THYRISTOR DISCRETE	SOT-227	MMO90-14IO6
POWER THYRISTOR DISCRETE	SOT-227	MMO90-16IO6
POWER THYRISTOR DISCRETE	SOT-227	MCD40-16IO6
POWER THYRISTOR DISCRETE	SOT-227	MCO100-12IO1
POWER THYRISTOR DISCRETE	SOT-227	CLA110MB1200NA
POWER THYRISTOR DISCRETE	SOT-227	MCO150-16IO1
POWER THYRISTOR DISCRETE	SOT-227	MMO90-12IO6

POWER THYRISTOR DISCRETE	SOT-227	MCO100-16IO1
POWER THYRISTOR DISCRETE	SOT-227	MCO50-16IO1
POWER THYRISTOR DISCRETE	SOT-227	MMO62-16IO6
POWER THYRISTOR DISCRETE	SOT-227	MMO62-12IO6
POWER THYRISTOR DISCRETE	SOT-227	CLA100PD1200NA
POWER THYRISTOR DISCRETE	SOT-227	MCD40-12IO6
POWER THYRISTOR DISCRETE	SOT-227	MCO50-12IO1
POWER THYRISTOR DISCRETE	SOT-227	MCO25-12IO1
POWER THYRISTOR DISCRETE	SOT-227	MCO75-16IO1
POWER THYRISTOR DISCRETE	SOT-227	CLA60PD1200NA
POWER THYRISTOR DISCRETE	SOT-227	MCO75-12IO1
POWER THYRISTOR DISCRETE	SOT-227	MMO74-12IO6Y
POWER DIODE DISCRETE	SOT-227	DSEI2X101-12A-E
POWER DIODE DISCRETE	SOT-227	DHG100X600NA
POWER DIODE DISCRETE	SOT-227	DHG50X650NA
POWER DIODE DISCRETE	TO-220	DHG10I1800PA
POWER DIODE DISCRETE	TO-220	DSI30-12A
POWER DIODE DISCRETE	TO-220	DSEP29-06A
POWER DIODE DISCRETE	TO-220	DSEP15-06A
POWER DIODE DISCRETE	TO-220	DSI30-16A
POWER DIODE DISCRETE	TO-220	DSEI20-12A
POWER DIODE DISCRETE	TO-220	DSI30-08A
POWER DIODE DISCRETE	TO-220	DSEP29-12A
POWER DIODE DISCRETE	TO-220	DSEI12-12A
POWER DIODE DISCRETE	TO-220	DSEP12-12A
POWER DIODE DISCRETE	TO-220	DMA10I1600PA
POWER DIODE DISCRETE	TO-220	DSEI12-10A
POWER DIODE DISCRETE	TO-220	DSEP8-12A
POWER DIODE DISCRETE	TO-220	DSEI12-06A
POWER DIODE DISCRETE	TO-220	DHG30I600PA
POWER DIODE DISCRETE	TO-220	DPG20C300PB
POWER DIODE DISCRETE	TO-220	DSP8-08A
POWER DIODE DISCRETE	TO-220	DPF30I300PA
POWER DIODE DISCRETE	TO-220	DNA30E2200PA
POWER DIODE DISCRETE	TO-220	DPG30I300PA
POWER DIODE DISCRETE	TO-220	DSP8-12A

POWER DIODE DISCRETE	TO-220	DSEC16-06A
POWER DIODE DISCRETE	TO-220	DSEP8-06A
POWER DIODE DISCRETE	TO-220	DSEI8-06A
POWER DIODE DISCRETE	TO-220	DSEP29-06B
POWER DIODE DISCRETE	TO-220	DSEP15-06B
POWER DIODE DISCRETE	TO-220	DSEI25-06A
POWER DIODE DISCRETE	TO-220	DPG20C400PB
POWER DIODE DISCRETE	TO-220	DSEP12-12B
POWER DIODE DISCRETE	TO-220	DPG30C300PB
POWER DIODE DISCRETE	TO-220	DHG20C600PB
POWER DIODE DISCRETE	TO-220	DSEC16-12A
POWER DIODE DISCRETE	TO-220	DHG20I1200PA
POWER DIODE DISCRETE	TO-220	DPG15I300PA
POWER DIODE DISCRETE	TO-220	DPG30C200PB
POWER DIODE DISCRETE	TO-220	DPG10I400PA
POWER DIODE DISCRETE	TO-220	DPG20C200PB
POWER DIODE DISCRETE	TO-220	DSSK16-01A
POWER DIODE DISCRETE	TO-220	DPG30C400PB
POWER DIODE DISCRETE	TO-220	DHG10I1200PA
POWER DIODE DISCRETE	TO-220	DHG20I600PA
POWER DIODE DISCRETE	TO-220	DSA15I45PA
POWER DIODE DISCRETE	TO-220	DSB20I15PA
POWER DIODE DISCRETE	TO-220	DHG20C1200PB
POWER DIODE DISCRETE	TO-220	DPG15I200PA
POWER DIODE DISCRETE	TO-220	DSS25-0045A
POWER DIODE DISCRETE	TO-220	DSA20C100PB
POWER DIODE DISCRETE	TO-220	DPG10I300PA
POWER DIODE DISCRETE	TO-220	DSS25-0025B
POWER DIODE DISCRETE	TO-220	DPG10I200PA
POWER DIODE DISCRETE	TO-220	DSEP8-06B
POWER DIODE DISCRETE	TO-220	DSA20C45PB
POWER DIODE DISCRETE	TO-220	DSSK20-0045B
POWER DIODE DISCRETE	TO-220	DHG10I600PA
POWER DIODE DISCRETE	TO-220	DSSK10-018A
POWER DIODE DISCRETE	TO-220	DSS10-006A
POWER DIODE DISCRETE	TO-220	DSA30C60PB
POWER DIODE DISCRETE	TO-220	DSB30C60PB
POWER DIODE DISCRETE	TO-220	DSB60C45PB
POWER DIODE DISCRETE	TO-220	DSB60C60PB
POWER DIODE DISCRETE	TO-220	DSA60C60PB
POWER DIODE DISCRETE	TO-220	DSB30C30PB

POWER DIODE DISCRETE	TO-220	DSA60C45PB
POWER DIODE DISCRETE	TO-220	DSSK38-0025B
POWER DIODE DISCRETE	TO-220	DSA20C200PB
POWER DIODE DISCRETE	TO-220	DSB30C45PB
POWER DIODE DISCRETE	TO-220	DSA30C100PB
POWER DIODE DISCRETE	TO-220	DSB60C30PB
POWER DIODE DISCRETE	TO-220	DSA60C100PB
POWER DIODE DISCRETE	TO-220	DPF10I600APA
POWER DIODE DISCRETE	TO-220	DHG10C600PB
POWER DIODE DISCRETE	TO-220	DHG5I600PA
POWER DIODE DISCRETE	TO-220	DSA10C150PB
POWER DIODE DISCRETE	TO-220	DSA30C45PB
POWER DIODE DISCRETE	TO-220	DSEP29-12B
POWER DIODE DISCRETE	TO-220	DSS16-0045A
POWER THYRISTOR DISCRETE	TO-220	CS19-12HO1
POWER THYRISTOR DISCRETE	TO-220	CLA15E1200NPB
POWER THYRISTOR DISCRETE	TO-220	CLA30E1200PB
POWER THYRISTOR DISCRETE	TO-220	CMA30E1600PB
POWER THYRISTOR DISCRETE	TO-220	CS19-08HO1
POWER THYRISTOR DISCRETE	TO-220	CMA20E1600PB
POWER THYRISTOR DISCRETE	TO-220	CLA40MT1200NPB
POWER THYRISTOR DISCRETE	TO-220	CLA30MT1200NPB
POWER THYRISTOR DISCRETE	TO-220	CLF20E1200PB
POWER THYRISTOR DISCRETE	TO-220	CLE30E1200PB
POWER DIODE DISCRETE	TO-247	DSP45-12A
POWER DIODE DISCRETE	TO-247	DSI45-12A
POWER DIODE DISCRETE	TO-247	DPG60I400HA
POWER DIODE DISCRETE	TO-247	DSEI120-12A
POWER DIODE DISCRETE	TO-247	DSP45-16A
POWER DIODE DISCRETE	TO-247	DPG60C300HB
POWER DIODE DISCRETE	TO-247	DSP25-12A
POWER DIODE DISCRETE	TO-247	DSEI60-06A
POWER DIODE DISCRETE	TO-247	DSEI60-10A
POWER DIODE DISCRETE	TO-247	DSI45-16A
POWER DIODE DISCRETE	TO-247	DSEI120-06A
POWER DIODE DISCRETE	TO-247	DSEK60-06A
POWER DIODE DISCRETE	TO-247	DSEI30-12A

POWER DIODE DISCRETE	TO-247	DLA60I1200HA
POWER DIODE DISCRETE	TO-247	DSI60-18A
POWER DIODE DISCRETE	TO-247	DSEI30-06A
POWER DIODE DISCRETE	TO-247	DSEI60-12A
POWER DIODE DISCRETE	TO-247	DPG60C400HB
POWER DIODE DISCRETE	TO-247	DSEI30-10A
POWER DIODE DISCRETE	TO-247	DMA80IM1600HB
POWER DIODE DISCRETE	TO-247	DSP25-16A
POWER DIODE DISCRETE	TO-247	DSA90C200HB
POWER DIODE DISCRETE	TO-247	DSEC60-12A
POWER DIODE DISCRETE	TO-247	DSEP60-06A
POWER DIODE DISCRETE	TO-247	DSEP60-12A
POWER DIODE DISCRETE	TO-247	DH60-18A
POWER DIODE DISCRETE	TO-247	DSEP30-12A
POWER DIODE DISCRETE	TO-247	DSEP30-06A
POWER DIODE DISCRETE	TO-247	DSP45-18A
POWER DIODE DISCRETE	TO-247	DSEC30-06A
POWER DIODE DISCRETE	TO-247	DMA50P1600HB
POWER DIODE DISCRETE	TO-247	DSEC60-06A
POWER DIODE DISCRETE	TO-247	DH40-18A
POWER DIODE DISCRETE	TO-247	DSSK60-015A
POWER DIODE DISCRETE	TO-247	DSEI60-02A
POWER DIODE DISCRETE	TO-247	DSSK50-01A
POWER DIODE DISCRETE	TO-247	DSEK60-02A
POWER DIODE DISCRETE	TO-247	DSSK60-02A
POWER DIODE DISCRETE	TO-247	DSEP60-12B
POWER DIODE DISCRETE	TO-247	DSI60-16A
POWER DIODE DISCRETE	TO-247	DSEP30-06B
POWER DIODE DISCRETE	TO-247	DPG30C400HB
POWER DIODE DISCRETE	TO-247	DPG30C300HB
POWER DIODE DISCRETE	TO-247	DSEC30-12A
POWER DIODE DISCRETE	TO-247	DPG30I400HA
POWER DIODE DISCRETE	TO-247	DSSK80-006B
POWER DIODE DISCRETE	TO-247	DH20-18A
POWER DIODE DISCRETE	TO-247	DH60-16A
POWER DIODE DISCRETE	TO-247	DPG80C400HB
POWER DIODE DISCRETE	TO-247	DSSK70-008A
POWER DIODE DISCRETE	TO-247	DMA30P1600HB
POWER DIODE DISCRETE	TO-247	DMA80I1600HA
POWER DIODE DISCRETE	TO-247	DSSK80-003B
POWER DIODE DISCRETE	TO-247	DSSK80-0045B

POWER DIODE DISCRETE	TO-247	DPG60I300HA
POWER DIODE DISCRETE	TO-247	DSSK30-018A
POWER DIODE DISCRETE	TO-247	DHG30I600HA
POWER DIODE DISCRETE	TO-247	DSA70C200HB
POWER DIODE DISCRETE	TO-247	DSS60-0045B
POWER DIODE DISCRETE	TO-247	DHG60I1200HA
POWER DIODE DISCRETE	TO-247	DPF60C300HB
POWER DIODE DISCRETE	TO-247	DSEC30-06B
POWER DIODE DISCRETE	TO-247	DSI45-08A
POWER DIODE DISCRETE	TO-247	DHG20I1200HA
POWER DIODE DISCRETE	TO-247	DPG30I300HA
POWER DIODE DISCRETE	TO-247	DSSK50-015A
POWER DIODE DISCRETE	TO-247	DPG60C200HB
POWER DIODE DISCRETE	TO-247	DSA70C100HB
POWER DIODE DISCRETE	TO-247	DHG30I1200HA
POWER DIODE DISCRETE	TO-247	DSA50C150HB
POWER DIODE DISCRETE	TO-247	DPG30C200HB
POWER DIODE DISCRETE	TO-247	DHG40C600HB
POWER DIODE DISCRETE	TO-247	DPG80C300HB
POWER DIODE DISCRETE	TO-247	DPF60I200HA
POWER DIODE DISCRETE	TO-247	DHG40C1200HB
POWER DIODE DISCRETE	TO-247	DSEC60-06B
POWER DIODE DISCRETE	TO-247	DSDI60-14A
POWER DIODE DISCRETE	TO-247	DMA50I800HA
POWER DIODE DISCRETE	TO-247	DPF80C200HB
POWER DIODE DISCRETE	TO-247	DH60-14A
POWER DIODE DISCRETE	TO-247	DSA70C150HB
POWER DIODE DISCRETE	TO-247	DSA60C45HB
POWER DIODE DISCRETE	TO-247	DSA50C100HB
POWER DIODE DISCRETE	TO-247	DSEK60-12A
POWER DIODE DISCRETE	TO-247	DMA50P1200HB
POWER DIODE DISCRETE	TO-247	DMA30E1800HA
POWER DIODE DISCRETE	TO-247	DPF60IM400HB
POWER DIODE DISCRETE	TO-247	DSEP30-12B
POWER DIODE DISCRETE	TO-247	DMA50I1600HA
POWER DIODE DISCRETE	TO-247	DSA80C45HB
POWER DIODE DISCRETE	TO-247	DSA60C60HB
POWER DIODE DISCRETE	TO-247	DHG20I600HA
POWER DIODE DISCRETE	TO-247	DSSK80-0025B
POWER DIODE DISCRETE	TO-247	DSSK40-006B
POWER DIODE DISCRETE	TO-247	DSSK40-008B

POWER DIODE DISCRETE	TO-247	DPF60C200HB
POWER DIODE DISCRETE	TO-247	DSSK30-01A
POWER DIODE DISCRETE	TO-247	DSB80C45HB
POWER DIODE DISCRETE	TO-247	DSSK70-0015B
POWER DIODE DISCRETE	TO-247	DSSK60-0045B
POWER DIODE DISCRETE	TO-247	DSSK40-0015B
POWER DIODE DISCRETE	TO-247	DSSK60-0045A
POWER DIODE DISCRETE	TO-247	DSA30C150HB
POWER DIODE DISCRETE	TO-247	DSB60C45HB
POWER DIODE DISCRETE	TO-247	DSS40-0008D
POWER DIODE DISCRETE	TO-247	DSB30C45HB
POWER DIODE DISCRETE	TO-247	DSSK80-0008D
POWER DIODE DISCRETE	TO-247	DFE60C600AHB
POWER DIODE DISCRETE	TO-247	DMA50I1200HA
POWER DIODE DISCRETE	TO-247	DHG60C600HB
POWER DIODE DISCRETE	TO-247	DHG60I600HA
POWER DIODE DISCRETE	TO-247	DPF30I600AHA
POWER DIODE DISCRETE	TO-247	DSA30C100HB
POWER DIODE DISCRETE	TO-247	DSA30C45HB
POWER DIODE DISCRETE	TO-247	DSB60C30HB
POWER DIODE DISCRETE	TO-247	DSB60C60HB
POWER DIODE DISCRETE	TO-247	DSSK50-0025B
POWER DIODE DISCRETE	TO-247	DSSK70-003B
POWER THYRISTOR DISCRETE	TO-247	CS20-16IO1
POWER THYRISTOR DISCRETE	TO-247	CLA80MT1200NHB
POWER THYRISTOR DISCRETE	TO-247	CLA50E1200HB
POWER THYRISTOR DISCRETE	TO-247	CLA80E1200HF
POWER THYRISTOR DISCRETE	TO-247	CS45-16IO1
POWER THYRISTOR DISCRETE	TO-247	CS30-16IO1
POWER THYRISTOR DISCRETE	TO-247	CLA100E1200HB
POWER THYRISTOR DISCRETE	TO-247	CS60-16IO1
POWER THYRISTOR DISCRETE	TO-247	CLA30E1200HB
POWER THYRISTOR DISCRETE	TO-247	CS45-12IO1
POWER THYRISTOR DISCRETE	TO-247	CMA50E1600HB
POWER THYRISTOR DISCRETE	TO-247	CMA80E1600HB
POWER THYRISTOR DISCRETE	TO-247	CS45-08IO1

POWER THYRISTOR DISCRETE	TO-247	CLA60MT1200NHB
POWER THYRISTOR DISCRETE	TO-247	CS30-12IO1
POWER THYRISTOR DISCRETE	TO-247	CS60-12IO1
POWER THYRISTOR DISCRETE	TO-247	CMA80MT1600NHB
POWER THYRISTOR DISCRETE	TO-247	CS20-12IO1
POWER THYRISTOR DISCRETE	TO-247	CS30-14IO1
POWER THYRISTOR DISCRETE	TO-247	CS20-14IO1
POWER THYRISTOR DISCRETE	TO-247	CMA60MT1600NHB
POWER THYRISTOR DISCRETE	TO-247	CS60-14IO1
POWER THYRISTOR DISCRETE	TO-247	CLB30I1200HB
POWER THYRISTOR DISCRETE	TO-247	CLA50E1200AHB
POWER DIODE DISCRETE	TO-247	DHG30I600HA
POWER DIODE DISCRETE	TO-247	DHG60C600HB
POWER DIODE DISCRETE	TO-247	DHG60I600HA
POWER DIODE DISCRETE	TO-262	DNA30ER2200IY
POWER DIODE DISCRETE	TO-262	DSA15IM45IB
POWER DIODE DISCRETE	TO-262	DSA30C200IB
POWER DIODE DISCRETE	TO-262	DSB15IM45IB
POWER DIODE DISCRETE	TO-263	DPG60IM300PC-TRL
POWER DIODE DISCRETE	TO-263	DSEC16-12AS-TRL
POWER DIODE DISCRETE	TO-263	DSI30-16AS-TRL
POWER DIODE DISCRETE	TO-263	DSI30-08AS-TRL
POWER DIODE DISCRETE	TO-263	DLA40IM800PC-TRL
POWER DIODE DISCRETE	TO-263	DSP8-12S-TRL
POWER DIODE DISCRETE	TO-263	DSEP40-03AS-TRL
POWER DIODE DISCRETE	TO-263	DSEP29-06AS-TRL
POWER DIODE DISCRETE	TO-263	DSI30-12AS-TRL
POWER DIODE DISCRETE	TO-263	DMA10P1600PZ-TRL
POWER DIODE DISCRETE	TO-263	DPG60C300PC-TRL
POWER DIODE DISCRETE	TO-263	DSEP12-12AZ-TRL
POWER DIODE DISCRETE	TO-263	DSP8-08AS-TRL
POWER DIODE DISCRETE	TO-263	DNA30EM2200PZ-TRL
POWER DIODE DISCRETE	TO-263	DSP8-08S-TRL
POWER DIODE DISCRETE	TO-263	DPG20C400PC-TRL
POWER DIODE DISCRETE	TO-263	DMA30IM1600PZ-TRL
POWER DIODE DISCRETE	TO-263	DSEI36-06AS-TRL
POWER DIODE DISCRETE	TO-263	DLA20IM800PC-TRL

POWER DIODE DISCRETE	TO-263	DSEP12-12BZ-TRL
POWER DIODE DISCRETE	TO-263	DNA30E2200PZ-TRL
POWER DIODE DISCRETE	TO-263	DSEI8-06AS-TRL
POWER DIODE DISCRETE	TO-263	DSI30-08AS-TUB
POWER DIODE DISCRETE	TO-263	DPG30C300PC-TRL
POWER DIODE DISCRETE	TO-263	DNA30EM2200PZ-TUB
POWER DIODE DISCRETE	TO-263	DSI30-16AS-TUB
POWER DIODE DISCRETE	TO-263	DPG30C200PC-TRL
POWER DIODE DISCRETE	TO-263	DMA10IM1600PZ-TRL
POWER DIODE DISCRETE	TO-263	DSEI36-06AS-TUB
POWER DIODE DISCRETE	TO-263	DSEI19-06AS-TRL
POWER DIODE DISCRETE	TO-263	DSP8-08S-TUB
POWER DIODE DISCRETE	TO-263	DSEP29-06AS-TUB
POWER DIODE DISCRETE	TO-263	DSI30-12AS-TUB
POWER DIODE DISCRETE	TO-263	DSP8-12AS-TUB
POWER DIODE DISCRETE	TO-263	DSEI8-06AS-TUB
POWER DIODE DISCRETE	TO-263	DPG60C300PC-TUB
POWER DIODE DISCRETE	TO-263	DPG60IM300PC-TUB
POWER DIODE DISCRETE	TO-263	DSP8-12AS-TRL
POWER DIODE DISCRETE	TO-263	DSEI19-06AS-TUB
POWER DIODE DISCRETE	TO-263	DHG30IM600PC-TRL
POWER DIODE DISCRETE	TO-263	DLA40IM800PC-TUB
POWER DIODE DISCRETE	TO-263	DSP8-08AS-TUB
POWER DIODE DISCRETE	TO-263	DSEP15-06AS-TRL
POWER DIODE DISCRETE	TO-263	DAA10EM1800PZ-TRL
POWER DIODE DISCRETE	TO-263	DSEP12-12AZ-TUB
POWER DIODE DISCRETE	TO-263	DHG30IM600PC-TUB
POWER DIODE DISCRETE	TO-263	DSEP12-12BZ-TUB
POWER DIODE DISCRETE	TO-263	DAA10EM1800PZ-TUB
POWER DIODE DISCRETE	TO-263	DPG30C200PC-TUB
POWER DIODE DISCRETE	TO-263	DSEP15-06BS-TRL
POWER DIODE DISCRETE	TO-263	DSEI25-06AS-TUB
POWER DIODE DISCRETE	TO-263	DNA30E2200PZ-TUB
POWER DIODE DISCRETE	TO-263	DSP8-12S-TUB
POWER DIODE DISCRETE	TO-263	DMA30IM1600PZ-TUB
POWER DIODE DISCRETE	TO-263	DLA20IM800PC-TUB
POWER DIODE DISCRETE	TO-263	DSEC16-12AS-TUB
POWER DIODE DISCRETE	TO-263	DSEP15-06AS-TUB
POWER DIODE DISCRETE	TO-263	DPG30IM400PC-TUB
POWER DIODE DISCRETE	TO-263	DSEI12-06AS-TUB
POWER DIODE DISCRETE	TO-263	DSEP40-03AS-TUB

POWER DIODE DISCRETE	TO-263	DPG30IM300PC-TUB
POWER DIODE DISCRETE	TO-263	DAA10P1800PZ-TUB
POWER DIODE DISCRETE	TO-263	DSEP15-06BS-TUB
POWER DIODE DISCRETE	TO-263	DSS16-01AS-TRL
POWER DIODE DISCRETE	TO-263	DMA10P1600PZ-TUB
POWER DIODE DISCRETE	TO-263	DPG30C300PC-TUB
POWER DIODE DISCRETE	TO-263	DPG30IM300PC-TRL
POWER DIODE DISCRETE	TO-263	DSEI12-06AS-TRL
POWER DIODE DISCRETE	TO-263	DMA10P1800PZ-TUB
POWER DIODE DISCRETE	TO-263	DSS16-0045AS-TRL
POWER DIODE DISCRETE	TO-263	DSSK28-006BS-TRL
POWER DIODE DISCRETE	TO-263	DSEI12-12AZ-TUB
POWER DIODE DISCRETE	TO-263	DPG20C400PC-TUB
POWER DIODE DISCRETE	TO-263	DMA10IM1600PZ-TUB
POWER DIODE DISCRETE	TO-263	DSA30C45PC-TRL
POWER DIODE DISCRETE	TO-263	DSS10-01AS-TRL
POWER DIODE DISCRETE	TO-263	DSSK38-0025BS-TRL
POWER DIODE DISCRETE	TO-263	DSSK48-003BS-TRL
POWER DIODE DISCRETE	TO-263	DSEI25-06AS-TRL
POWER DIODE DISCRETE	TO-263	DHG30IM600PC
POWER THYRISTOR DISCRETE	TO-263	CME30E1600PZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CS1854-TRL
POWER THYRISTOR DISCRETE	TO-263	CLA30MT1200NPZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CLE20E1200PC-TRL
POWER THYRISTOR DISCRETE	TO-263	CLA30E1200PC-TRL
POWER THYRISTOR DISCRETE	TO-263	CLA15E1200NPZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CLA30E1200NPZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CLB30I1200PZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CMA30E1600PZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CS19-12HO1S-TRL
POWER THYRISTOR DISCRETE	TO-263	CS19-08HO1S-TRL
POWER THYRISTOR DISCRETE	TO-263	CLA40E1200NPZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CMA20E1600PZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CS19-12HO1S-TUB
POWER THYRISTOR DISCRETE	TO-263	CS19-08HO1S-TUB

POWER THYRISTOR DISCRETE	TO-263	CLA40MT1200NPZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CLA30MT1200NPZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CLB30I1200PZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CLA30E1200NPZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CLA15E1200NPZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CLA5E1200PZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CLB40I1200PZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CMA30E1600PZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CME30E1600PZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CLE20E1200PC-TUB
POWER THYRISTOR DISCRETE	TO-263	CLA30E1200PC-TUB
POWER THYRISTOR DISCRETE	TO-263	CLA20EF1200PZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CLA20EF1200PZ-TUB
POWER THYRISTOR DISCRETE	TO-263	CLA40E1200NPZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CS1854
POWER THYRISTOR DISCRETE	TO-263	CLB40I1200PZ-TRL
POWER THYRISTOR DISCRETE	TO-263	CMA20E1600PZ-TRL
POWER DIODE DISCRETE	TO-263	DHG30IM600PC-TRL
POWER DIODE DISCRETE	TO-263	DHG30IM600PC-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSP45-12AZ-TRL
POWER DIODE DISCRETE	TO-268 (HV)	DSEP90-12AZ-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSP45-12AZ-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSEP60-06AT-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSEI120-12AZ-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSP25-12AT-TRL
POWER DIODE DISCRETE	TO-268 (HV)	DSP25-16AT-TRL
POWER DIODE DISCRETE	TO-268 (HV)	DSEP60-12AZ-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSP25-12AT-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSP25-16AT-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSP45-16AZ-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DLA100IM1200TZ-TUB
POWER THYRISTOR DISCRETE	TO-268 (HV)	CS20-25MOT1-TUB
POWER THYRISTOR DISCRETE	TO-268 (HV)	CLA50E1200TC-TRL

POWER THYRISTOR DISCRETE	TO-268 (HV)	CLA50E1200TC-TUB
POWER THYRISTOR DISCRETE	TO-268 (HV)	CLA60MT1200NTZ-TUB
POWER THYRISTOR DISCRETE	TO-268 (HV)	CMA50E1600TZ-TUB
POWER THYRISTOR DISCRETE	TO-268 (HV)	CLA100E1200TZ-TUB
POWER THYRISTOR DISCRETE	TO-268 (HV)	CLA60MT1200NTZ-TRL
POWER THYRISTOR DISCRETE	TO-268 (HV)	CNE60E2200TZ-TUB
POWER THYRISTOR DISCRETE	TO-268 (HV)	CMA50E1600TZ-TRL
POWER DIODE DISCRETE	TO-268 (HV)	DSEP60-06AT-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSP25-12AT-TRL
POWER DIODE DISCRETE	TO-268 (HV)	DSP25-16AT-TRL

POWER DIODE DISCRETE	TO-268 (HV)	DSP25-12AT-TUB
POWER DIODE DISCRETE	TO-268 (HV)	DSP25-16AT-TUB
POWER THYRISTOR DISCRETE	TO-268 (HV)	CLA50E1200TC-TRL
POWER THYRISTOR DISCRETE	TO-268 (HV)	CLA50E1200TC-TUB
POWER DIODE DISCRETE	TO-3P	DPG120C300QB
POWER DIODE DISCRETE	TO-3P	DPG60C200QB
POWER DIODE DISCRETE	TO-3P	DPG60C300QB
POWER DIODE DISCRETE	TO-3P	DPG60C400QB
POWER DIODE DISCRETE	TO-3P	DPG60IM400QB
POWER DIODE DISCRETE	TO-3P	DHG20C600QB
POWER DIODE DISCRETE	TO-3P	DSA30C100QB
POWER THYRISTOR DISCRETE	TO-3P	CMA50E1600QB