



Product Change Notification



Product Group: Diodes / September 12, 2016 / PCN-DD-16-2016 Rev 0

Matrix Leadframe Dual Gage Introduction and additional Halogen Free Mold Compound

DESCRIPTION OF CHANGE: Vishay Semiconductors announces the change from Single Row Dual Gauge to Matrix Dual Gauge Lead-frame. Together with the lead-frame change, Vishay announces the introduction of an additional Halogen Free mold compound.

CLASSIFICATION OF CHANGE: Assembly Process/Structure Molding/Coating

REASON FOR CHANGE: Increase of manufacturing capacity and BOM consolidation for improved manufacturing flexibility

EXPECTED INFLUENCE ON QUALITY/RELIABILITY/PERFORMANCE: There will be no effect on quality, reliability, or electrical/thermal performances.

PRODUCT CATEGORY: Hexfred, Schottky and Standard diodes in DPAK(TO-252) package

PART NUMBERS/SERIES/FAMILIES AFFECTED:

Part number	Category
VS-99-2051PBF	HEXFRED
VS-HFA04SD60SL-M3	HEXFRED
VS-HFA04SD60S-M3	HEXFRED
VS-HFA04SD60SR-M3	HEXFRED
VS-HFA04SD60STR-M3	HEXFRED
VS-HFA08SD60SL-M3	HEXFRED
VS-HFA08SD60S-M3	HEXFRED
VS-HFA08SD60SR-M3	HEXFRED
VS-HFA08SD60STR-M3	HEXFRED
VS-10WQ045FN-M3	SCHOTTKY
VS-10WQ045FNTRL-M3	SCHOTTKY
VS-10WQ045FNTR-M3	SCHOTTKY
VS-10WQ045FNTRR-M3	SCHOTTKY
VS-12CWQ03FN-M3	SCHOTTKY
VS-12CWQ03FNTRL-M3	SCHOTTKY
VS-12CWQ03FNTR-M3	SCHOTTKY
VS-12CWQ03FNTRR-M3	SCHOTTKY
VS-12CWQ04FN-M3	SCHOTTKY
VS-12CWQ04FNTRL-M3	SCHOTTKY

Vishay Intertechnology, Inc.

Corporate Headquarters 63 Lincoln Highway, Malvern, PA 19355-2143 U.S.A. Phone (610) 644-1300 Fax (610) 296-0657 www.vishay.com

ONE OF THE WORLD'S LARGEST MANUFACTURERS OF DISCRETE SEMICONDUCTORS AND PASSIVE COMPONENT

Part number	Category
VS-12CWQ04FNTR-M3	SCHOTTKY
VS-12CWQ04FNTRR-M3	SCHOTTKY
VS-12CWQ06FN-M3	SCHOTTKY
VS-12CWQ06FNTRL-M3	SCHOTTKY
VS-12CWQ06FNTR-M3	SCHOTTKY
VS-12CWQ06FNTRR-M3	SCHOTTKY
VS-12CWQ10FN-M3	SCHOTTKY
VS-12CWQ10FNTRL-M3	SCHOTTKY
VS-12CWQ10FNTR-M3	SCHOTTKY
VS-12CWQ10FNTRR-M3	SCHOTTKY
VS-30WQ03FN-M3	SCHOTTKY
VS-30WQ03FNTRL-M3	SCHOTTKY
VS-30WQ03FNTR-M3	SCHOTTKY
VS-30WQ03FNTRR-M3	SCHOTTKY
VS-30WQ04FN-M3	SCHOTTKY
VS-30WQ04FNTRL-M3	SCHOTTKY
VS-30WQ04FNTR-M3	SCHOTTKY
VS-30WQ04FNTRR-M3	SCHOTTKY
VS-30WQ06FN-M3	SCHOTTKY
VS-30WQ06FNTRL-M3	SCHOTTKY
VS-30WQ06FNTR-M3	SCHOTTKY
VS-30WQ06FNTRR-M3	SCHOTTKY
VS-30WQ10FN-M3	SCHOTTKY
VS-30WQ10FNTRL-M3	SCHOTTKY
VS-30WQ10FNTR-M3	SCHOTTKY
VS-30WQ10FNTRR-M3	SCHOTTKY
VS-50WQ03FN-M3	SCHOTTKY
VS-50WQ03FNTRL-M3	SCHOTTKY
VS-50WQ03FNTR-M3	SCHOTTKY
VS-50WQ03FNTRR-M3	SCHOTTKY
VS-50WQ04FN-M3	SCHOTTKY
VS-50WQ04FNTRL-M3	SCHOTTKY
VS-50WQ04FNTR-M3	SCHOTTKY

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Part number	Category
VS-50WQ04FNTRR-M3	SCHOTTKY
VS-50WQ06FN-M3	SCHOTTKY
VS-50WQ06FNTRL-M3	SCHOTTKY
VS-50WQ06FNTR-M3	SCHOTTKY
VS-50WQ06FNTRR-M3	SCHOTTKY
VS-50WQ10FN-M3	SCHOTTKY
VS-50WQ10FNTRL-M3	SCHOTTKY
VS-50WQ10FNTR-M3	SCHOTTKY
VS-50WQ10FNTRR-M3	SCHOTTKY
VS-6CWQ03FN-M3	SCHOTTKY
VS-6CWQ03FNTRL-M3	SCHOTTKY
VS-6CWQ03FNTR-M3	SCHOTTKY
VS-6CWQ03FNTRR-M3	SCHOTTKY
VS-6CWQ04FN-M3	SCHOTTKY
VS-6CWQ04FNTRL-M3	SCHOTTKY
VS-6CWQ04FNTR-M3	SCHOTTKY
VS-6CWQ04FNTRR-M3	SCHOTTKY
VS-6CWQ06FN-M3	SCHOTTKY
VS-6CWQ06FNTRL-M3	SCHOTTKY
VS-6CWQ06FNTR-M3	SCHOTTKY
VS-6CWQ06FNTRR-M3	SCHOTTKY
VS-6CWQ10FN-M3	SCHOTTKY
VS-6CWQ10FNTRL-M3	SCHOTTKY
VS-6CWQ10FNTR-M3	SCHOTTKY
VS-6CWQ10FNTRR-M3	SCHOTTKY
VS-95-9817PBF	SCHOTTKY
VS-95-9829PBF	SCHOTTKY
VS-95-9867PBF	SCHOTTKY
VS-95-9868PBF	SCHOTTKY
VS-95-9898PBF	SCHOTTKY
VS-95-9964PBF	SCHOTTKY
VS-95-9965PBF	SCHOTTKY
VS-96-1007PBF	SCHOTTKY

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Part number	Category
VS-96-1042PBF	SCHOTTKY
VS-96-1060PBF	SCHOTTKY
VS-96-1080PBF	SCHOTTKY
VS-96-1081PBF	SCHOTTKY
VS-96-1082PBF	SCHOTTKY
VS-96-1085PBF	SCHOTTKY
VS-96-1089PBF	SCHOTTKY
VS-96-1096PBF	SCHOTTKY
VS-96-1097PBF	SCHOTTKY
VS-96-1099PBF	SCHOTTKY
VS-96-1204PBF	SCHOTTKY
VS-MBRD320-M3	SCHOTTKY
VS-MBRD320TRL-M3	SCHOTTKY
VS-MBRD320TR-M3	SCHOTTKY
VS-MBRD320TRR-M3	SCHOTTKY
VS-MBRD330-M3	SCHOTTKY
VS-MBRD330TRL-M3	SCHOTTKY
VS-MBRD330TR-M3	SCHOTTKY
VS-MBRD330TRR-M3	SCHOTTKY
VS-MBRD340-M3	SCHOTTKY
VS-MBRD340TRL-M3	SCHOTTKY
VS-MBRD340TR-M3	SCHOTTKY
VS-MBRD340TRR-M3	SCHOTTKY
VS-MBRD650CT-M3	SCHOTTKY
VS-MBRD650CTTRL-M3	SCHOTTKY
VS-MBRD650CTTR-M3	SCHOTTKY
VS-MBRD650CTTRR-M3	SCHOTTKY
VS-MBRD660CT-M3	SCHOTTKY
VS-MBRD660CTTRL-M3	SCHOTTKY
VS-MBRD660CTTR-M3	SCHOTTKY
VS-MBRD660CTTRR-M3	SCHOTTKY
VS-STPS1045B-M3	SCHOTTKY
VS-STPS1045BTRL-M3	SCHOTTKY

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Part number	Category
VS-STPS1045BTR-M3	SCHOTTKY
VS-STPS1045BTRR-M3	SCHOTTKY
VS-80-1314PBF	STANDARD DIODES
VS-8EWF02S-M3	STANDARD DIODES
VS-8EWF02STRL-M3	STANDARD DIODES
VS-8EWF02STR-M3	STANDARD DIODES
VS-8EWF02STRR-M3	STANDARD DIODES
VS-8EWF04S-M3	STANDARD DIODES
VS-8EWF04STRL-M3	STANDARD DIODES
VS-8EWF04STR-M3	STANDARD DIODES
VS-8EWF04STRR-M3	STANDARD DIODES
VS-8EWF06S-M3	STANDARD DIODES
VS-8EWF06STRL-M3	STANDARD DIODES
VS-8EWF06STR-M3	STANDARD DIODES
VS-8EWF06STRR-M3	STANDARD DIODES
VS-8EWF10S-M3	STANDARD DIODES
VS-8EWF10STRL-M3	STANDARD DIODES
VS-8EWF12S-M3	STANDARD DIODES
VS-8EWF12STRL-M3	STANDARD DIODES
VS-8EWF12STR-M3	STANDARD DIODES
VS-8EWF12STRR-M3	STANDARD DIODES
VS-8EWS08S-M3	STANDARD DIODES
VS-8EWS08STRL-M3	STANDARD DIODES
VS-8EWS08STR-M3	STANDARD DIODES
VS-8EWS08STRR-M3	STANDARD DIODES
VS-8EWS12S-M3	STANDARD DIODES
VS-8EWS12STRL-M3	STANDARD DIODES
VS-8EWS12STR-M3	STANDARD DIODES
VS-8EWS12STRR-M3	STANDARD DIODES
VS-8EWS16S-M3	STANDARD DIODES
VS-8EWS16STRL-M3	STANDARD DIODES
VS-8EWS16STR-M3	STANDARD DIODES
VS-8EWS16STRR-M3	STANDARD DIODES

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VISHAY BRAND(s): Vishay Semiconductors

TIME SCHEDULE: After **November 14, 2016** Vishay may start to implement the above changes on new production

SAMPLE AVAILABILITY: Available on customer

PRODUCT IDENTIFICATION: N/A

QUALIFICATION DATA: Qualification data is presented on page 7 of this PCN

ADDITIONAL DATA: POD drawing, dimensions and picture are presented from page 8 of this PCN

This PCN is considered approved, without further notification, unless we receive specific customer concerns before October 31, 2016 or as specified by contract.

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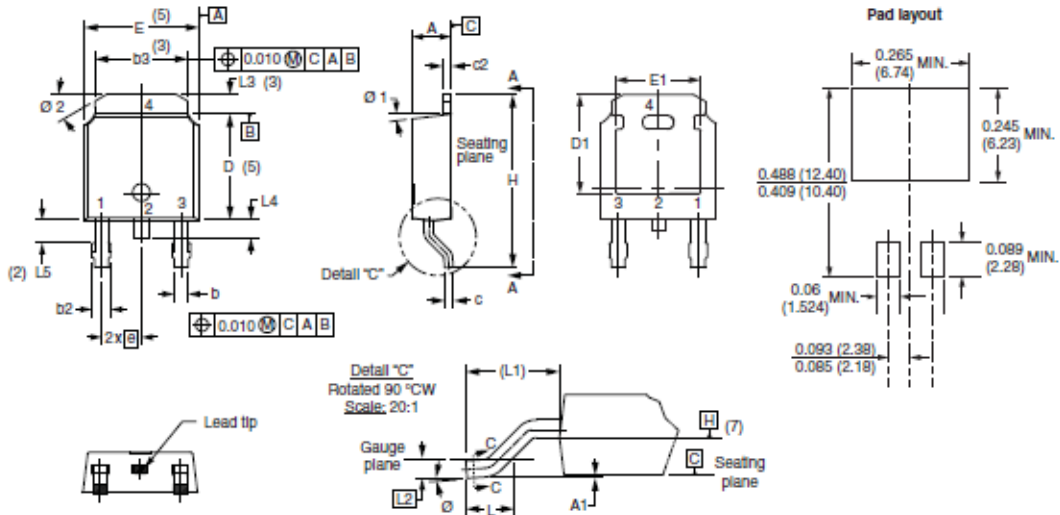
Qual Data: MATRIX LEADFRAME

STRESS	CONDITIONS	TEST POINTS	SAMPLES	FAIL
HTRB	Tjmax @100% rated voltage 1000hrs	0 168 500 1000	7 x 77	0/539
TC	-55°C/150°C 1000 cycles	0 250 500 1000	7 x 77	0/539
UHAST	130°C 85%RH 96hrs	0 48 96	7 x 77	0/539
H3TRB	85°C 85%HR @80% Vr 1000hrs	0 168 500 1000	7 x 77	0/539
IOL	DT=100°C 1000Hrs	0 500 1000	7 x 77	0/539

OUTLINE with STANDARD and MATRIX LEADFRAME

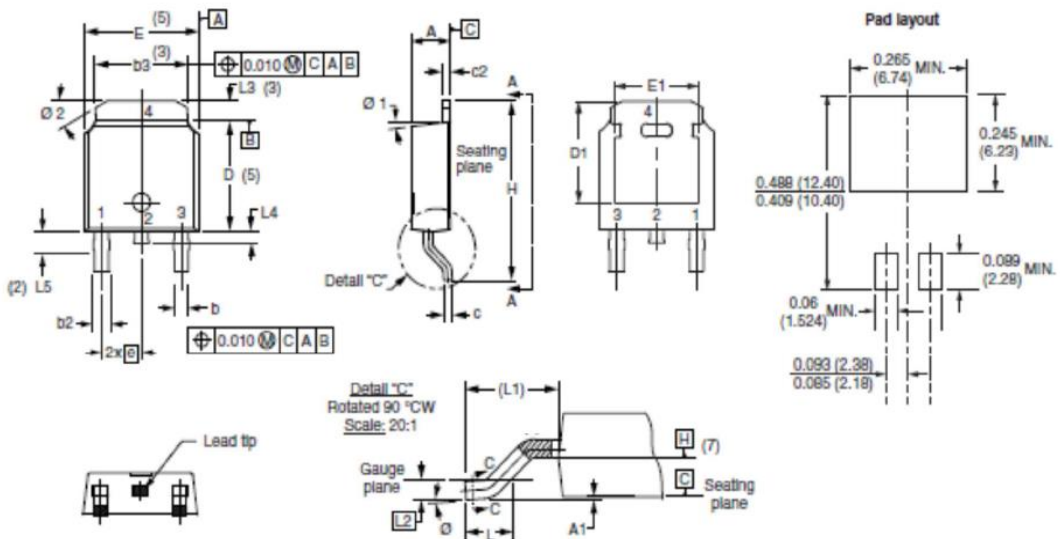
a) Standard:

DIMENSIONS in millimeters and inches



b) Matrix:

DIMENSIONS in millimeters and inches



DIMENSIONS

Both outline with Standard and Matrix Leadframe conform to JEDEC TO-252AA

SYMBOL	MILLIMETERS		INCHES		NOTES	SYMBOL	MILLIMETERS		INCHES		NOTES
	MIN.	MAX.	MIN.	MAX.			MIN.	MAX.	MIN.	MAX.	
A	2.18	2.39	0.086	0.094		e	2.29 BSC		0.090 BSC		
A1	-	0.13	-	0.005		H	9.40	10.41	0.370	0.410	
b	0.64	0.89	0.025	0.035		L	1.40	1.78	0.055	0.070	
b2	0.76	1.14	0.030	0.045		L1	2.74 BSC		0.108 REF.		
b3	4.95	5.46	0.195	0.215	3	L2	0.51 BSC		0.020 BSC		
c	0.46	0.61	0.018	0.024		L3	0.89	1.27	0.035	0.050	3
c2	0.46	0.89	0.018	0.035		L4	-	1.02	-	0.040	
D	5.97	6.22	0.235	0.245	5	L5	1.14	1.52	0.045	0.060	2
D1	5.21	-	0.205	-	3	Ø	0°	10°	0°	10°	
E	6.35	6.73	0.250	0.265	5	Ø1	0°	15°	0°	15°	
E1	4.32	-	0.170	-	3	Ø2	25°	35°	25°	35°	

Notes

- (1) Dimensioning and tolerancing as per ASME Y14.5M-1994
- (2) Lead dimension uncontrolled in L5
- (3) Dimension D1, E1, L3 and b3 establish a minimum mounting surface for thermal pad
- (4) Section C - C dimension apply to the flat section of the lead between 0.13 and 0.25 mm (0.005 and 0.10") from the lead tip
- (5) Dimension D, and E do not include mold flash. Mold flash shall not exceed 0.127 mm (0.005") per side. These dimensions are measured at the outermost extremes of the plastic body
- (6) Dimension b1 and c1 applied to base metal only
- (7) Datum A and B to be determined at datum plane H
- (8) Outline conforms to JEDEC® outline TO-252AA

APPEARANCE:

