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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16885**

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**Issue Date:** 27-Jul-2012

**TITLE:** Qualification of Good-Ark Electronics for SMA/SMB Power Rectifier Products

**PROPOSED FIRST SHIP DATE:** 27-Oct-2012

**AFFECTED CHANGE CATEGORY(S):** Power Discrete Division (PDD) of the Standard Product Group

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or  
Don Knudsen < [don.knudsen@onsemi.com](mailto:don.knudsen@onsemi.com) >

**SAMPLES:** Contact your local ON Semiconductor Sales Office or  
Norfizah Mohd Ariffin < [norfizah.mohdariffin@onsemi.com](mailto:norfizah.mohdariffin@onsemi.com) >

**ADDITIONAL RELIABILITY DATA:** Available  
Contact your local ON Semiconductor Sales Office or  
Laura Rivers < [laura.rivers@onsemi.com](mailto:laura.rivers@onsemi.com) >

**NOTIFICATION TYPE:**

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <[quality@onsemi.com](mailto:quality@onsemi.com)>.

**DESCRIPTION AND PURPOSE:**

This FPCN announces the planned capacity expansion of ON Semiconductor's SMA/SMB products currently built at Seeful LiteON Shanghai facility, to Good-Ark electronics Co., Ltd. at Suzhou facility.

Upon the expiration of this FPCN, these Power Rectifiers devices may be processed at either location. These products have been qualified to AEC-Q101 requirements. Good-Ark Electronics is a current ON Semiconductor supplier of other power packages and is ISO9002, ISO14001 and TS16949 certified. These products will continue being Pb-free, Halide free and RoHS compliant. Included in this notification are slight modifications to non-critical dimensions on the SMA and SMB case outlines to match current JEDEC standards.



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**RELIABILITY DATA SUMMARY:**

Package: **SMA**

Qualification Vehicle:

**MRA4007T3G**

**Reliability Test Results:**

Test	Conditions	Results	
HTRB	Ta=150°C,80% Rated Voltage	1008 hrs	0/240
Autoclave+PC	Ta=121°C RH=100% ~15 psig	96 hrs	0/240
H3TRB+PC	Ta=85°C RH=85%	1008 hrs	0/240
	bias=80% rated V or100V Max		
	DPA	1008 hrs	Pass
IOL+PC	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15000 cyc	0/240
TC+PC	Ta= -65°C to 150°C	1000 cyc	0/240
	DPA	1008 hrs	Pass
HTSL	Ta=150°C	1008 hrs	0/240
RSH	Ta=260°C, 10 sec dwell		0/90
Solderability	Ta=245°C, 10sec dwell		0/45

Package: **SMB**

Qualification Vehicle:

**MRS1504T3G**

**Reliability Test Results:**

Test	Conditions	Results	
HTRB	Ta=150°C,80% Rated Voltage	1008 hrs	0/252
Autoclave+PC	Ta=121°C RH=100% ~15 psig	96 hrs	0/252
H3TRB+PC	Ta=85°C RH=85%	1008 hrs	0/252
	bias=80% rated V or100V Max		
	DPA	1008 hrs	Pass
IOL+PC	Ta=25°C, Delta TJ = 100°C, Ton/off = 2 min.	15000 cyc	0/252
TC+PC	Ta= -65°C to 150°C	1000 cyc	0/252
	DPA	1008 hrs	Pass
HTSL	Ta=150°C	1008 hrs	0/252
RSH	Ta=260°C, 10 sec dwell		0/90
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**ELECTRICAL CHARACTERISTIC SUMMARY:**

There are no changes in electrical characteristics and product performance meets data sheet Specifications. Characterization data is available upon request.

**CHANGED PART IDENTIFICATION:**

Product from Good-Ark Electronics will be identified by "g" site code marking.



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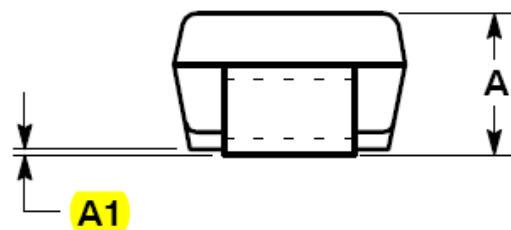
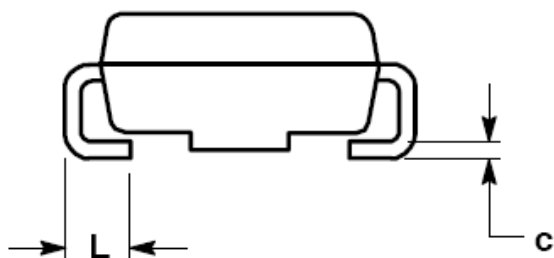
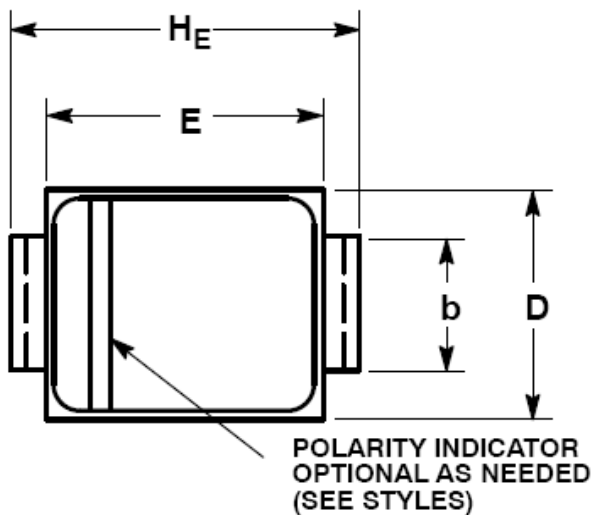
NEW CASE OUTLINE DIMENSIONS:

SMA

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSION b SHALL BE MEASURED WITHIN DIMENSION L.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.97	2.10	2.20	0.078	0.083	0.087
A1	0.05	0.10	0.20	0.002	0.004	0.008
b	1.27	1.45	1.63	0.050	0.057	0.064
c	0.15	0.28	0.41	0.006	0.011	0.016
D	2.29	2.60	2.92	0.090	0.103	0.115
E	4.06	4.32	4.57	0.160	0.170	0.180
H <sub>E</sub>	4.83	5.21	5.59	0.190	0.205	0.220
L	0.76	1.14	1.52	0.030	0.045	0.060





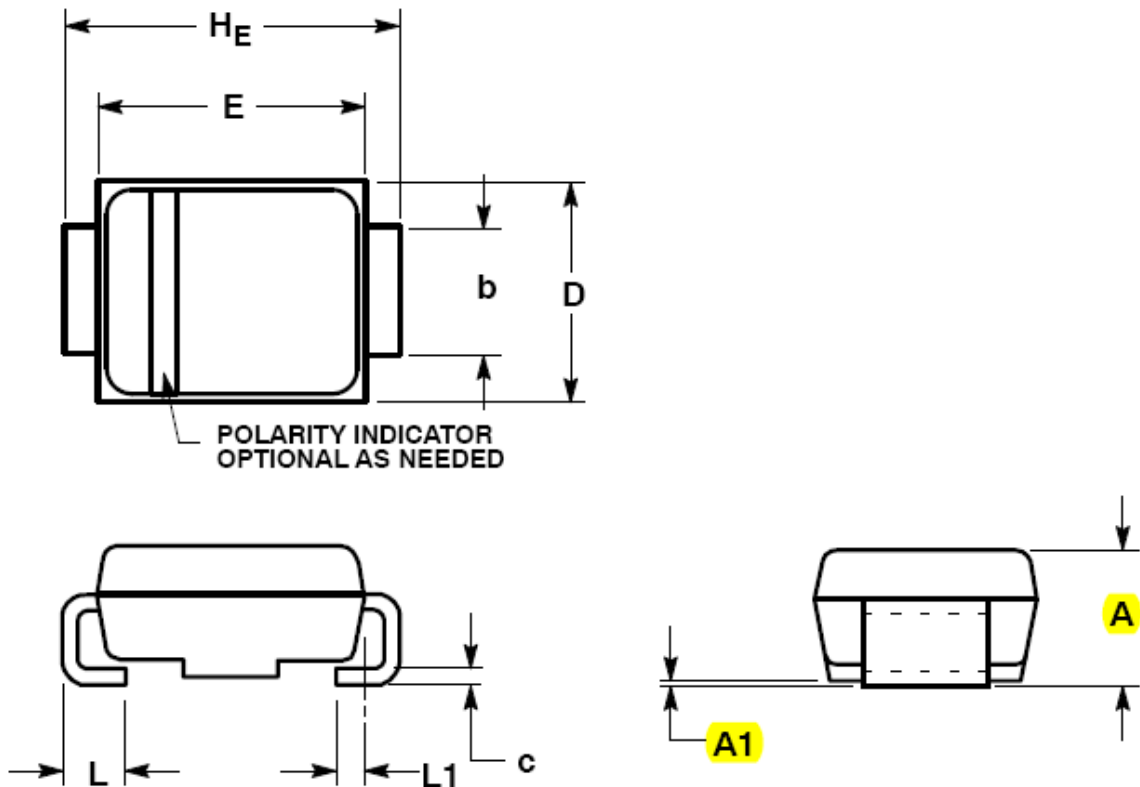
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**SMB**

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSION b SHALL BE MEASURED WITHIN DIMENSION L1.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.95	2.30	2.47	0.077	0.091	0.097
A1	0.05	0.10	0.20	0.002	0.004	0.008
b	1.96	2.03	2.20	0.077	0.080	0.087
c	0.15	0.23	0.31	0.006	0.009	0.012
D	3.30	3.56	3.95	0.130	0.140	0.156
E	4.06	4.32	4.60	0.160	0.170	0.181
H <sub>E</sub>	5.21	5.44	5.60	0.205	0.214	0.220
L	0.76	1.02	1.60	0.030	0.040	0.063
L1	0.51 REF			0.020 REF		





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**List of affected General Parts:**

**SMA PART#s**

MRA4003T3G  
MRA4004T3G  
MRA4005T1G  
MRA4005T3G  
MRA4006T3G  
MRA4007T3G  
NRVA4004T3G  
NRVA4007T3G

**SMB PART#s**

MRS1504T3G  
NRVS1504T3G