TVS SMB Package Structure Upgrade from Two-piece

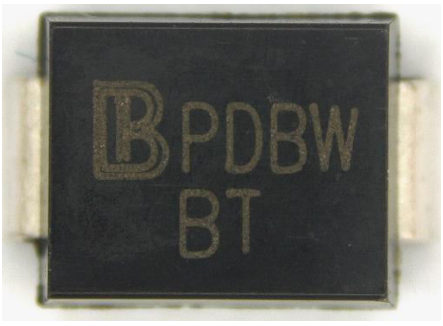
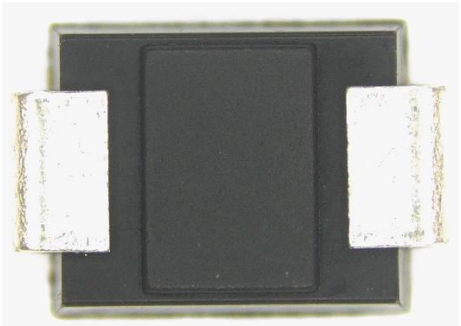
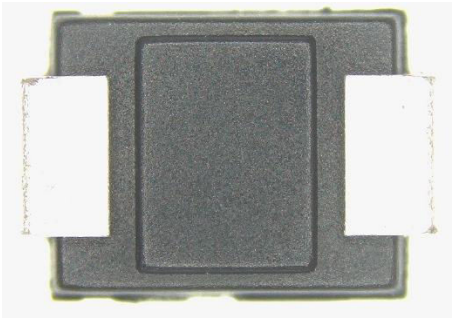
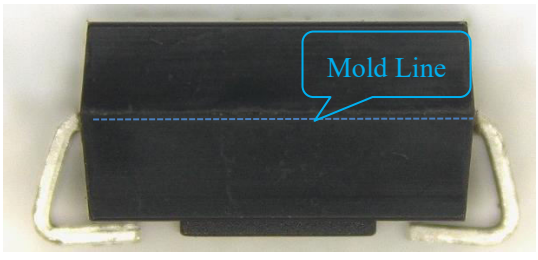
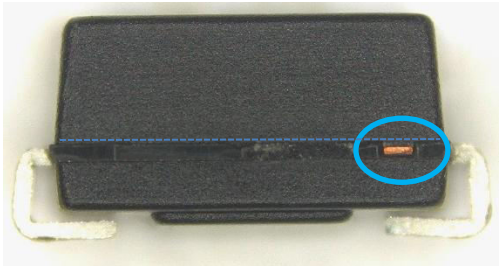
Structure to Matrix Clip Technology - Comparison Report

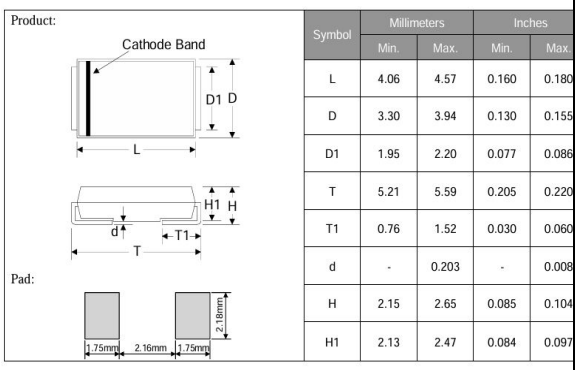
Report No：2026091801

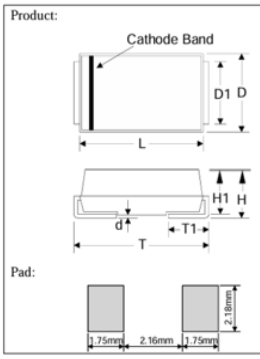
Revision	A0	Update Date	/	Initial Report Date	2026-09-18
Prepared By	Fang Luo	Confirmed By	Victoria	Reviewed By	Yihu Pan
Purpose	Comparison of appearance, dimensions, internal structure and performance before and after product change.				

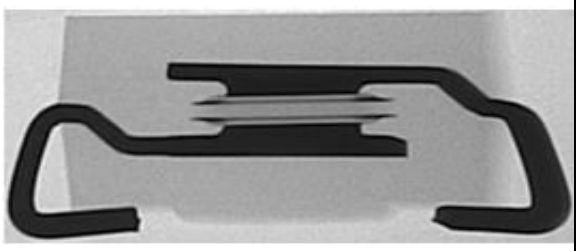
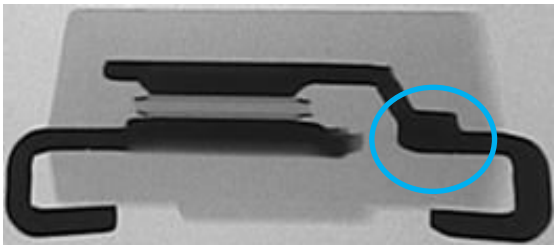
Part I: Comparison Before and After Change

1.1 Product Appearance， Dimension and Internal Structure Comparison：

Item	Before Change	After Change
Process	Two-piece Structure	Matrix Clip Structure
Product Front View		
Product Back View		
Product Side View		
Description	No copper clip visible on package side	0~4 copper clips may be visible and do not affect electrical performance
	Glossy surface	Matte surface

<table>
<tr><td>Item</td><td>Before Change</td><td>After Change</td></tr>
<tr><td>Process</td><td>Two-piece Structure</td><td>Matrix Clip Structure</td></tr>
<tr><td></td><td>Mold line centered</td><td>Mold line shifted downward</td></tr>
<tr><td rowspan="2">Product Dimensions</td><td>Dimensions (SMB/DO-214AA)


<table>
<tr><th rowspan="2">Symbol</th><th colspan="2">Millimeters</th><th colspan="2">Inches</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Min.</th><th>Max.</th></tr>
<tr><td>L</td><td>4.06</td><td>4.57</td><td>0.160</td><td>0.180</td></tr>
<tr><td>D</td><td>3.30</td><td>3.94</td><td>0.130</td><td>0.155</td></tr>
<tr><td>D1</td><td>1.95</td><td>2.20</td><td>0.077</td><td>0.086</td></tr>
<tr><td>T</td><td>5.21</td><td>5.59</td><td>0.205</td><td>0.220</td></tr>
<tr><td>T1</td><td>0.76</td><td>1.52</td><td>0.030</td><td>0.060</td></tr>
<tr><td>d</td><td>-</td><td>0.203</td><td>-</td><td>0.008</td></tr>
<tr><td>H</td><td>2.15</td><td>2.65</td><td>0.085</td><td>0.104</td></tr>
<tr><td>H1</td><td>2.13</td><td>2.47</td><td>0.084</td><td>0.097</td></tr>
</table></td><td>Dimensions (SMB/DO-214AA)


<table>
<tr><th rowspan="2">Symbol</th><th colspan="2">Millimeters</th><th colspan="2">Inches</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Min.</th><th>Max.</th></tr>
<tr><td>L</td><td>4.06</td><td>4.57</td><td>0.160</td><td>0.180</td></tr>
<tr><td>D</td><td>3.30</td><td>3.94</td><td>0.130</td><td>0.155</td></tr>
<tr><td>D1</td><td>1.95</td><td>2.20</td><td>0.077</td><td>0.086</td></tr>
<tr><td>T</td><td>5.21</td><td>5.59</td><td>0.205</td><td>0.220</td></tr>
<tr><td>T1</td><td>0.76</td><td>1.52</td><td>0.030</td><td>0.060</td></tr>
<tr><td>d</td><td>-</td><td>0.203</td><td>-</td><td>0.008</td></tr>
<tr><td>H</td><td>2.15</td><td>2.65</td><td>0.085</td><td>0.104</td></tr>
<tr><td>H1</td><td>2.13</td><td>2.47</td><td>0.084</td><td>0.097</td></tr>
</table></td></tr>
<tr><td colspan="2">Product dimensions remain unchanged before and after change.</td></tr>
<tr><td rowspan="2">Internal Structure</td><td></td><td></td></tr>
<tr><td>Two-piece structure</td><td>Matrix clip structure</td></tr>
<tr><td>Basic Electrical Characteristics</td><td colspan="2">Electrical characteristics remain unchanged.</td></tr>
</table>

1.2 Reliability

Part Number	Process	HTRB	PCT	TC	HTSL	SR	SAT	Result
SMBJ5.0CA	Matrix Clip	0/77	0/77	0/77	0/77	0/77	0/77	OK
SMBJ36CA	Matrix Clip	0/77	0/77	0/77	0/77	0/77	0/77	OK
SMBJ220CA	Matrix Clip	0/77	0/77	0/77	0/77	0/77	0/77	OK

Part II: Conclusion

The verification results for each item are shown below.:

Item	Before Change	After Change	Description
Package Appearance	The package surface was glossy, and no copper clips were visible on the side of the package.	The package surface is matte, and 0 to 4 copper clips may be visible on the side of the package.	This change only affects the product appearance and does not impact electrical performance, reliability, or functionality.
Mold Flash Line Position	The mold flash line was located at the center of the package.	The mold flash line is positioned slightly lower than the center of the package.	This change is due to process optimization and only results in a minor cosmetic difference. It does not affect product dimensions, electrical characteristics, reliability, or functionality.
Internal Structure	Two-piece structure.	Matrix clip structure.	Manufacturing process upgrade.
Package Dimensions	Dimensions specified in the datasheet remain unchanged.	Dimensions specified in the datasheet remain unchanged.	No change.
Electrical Characteristics	Electrical characteristics defined in the datasheet remain unchanged.	Electrical characteristics defined in the datasheet remain unchanged.	No change.

Overall Impact: This change involves an internal package structure upgrade and process optimization. Product dimensions, electrical characteristics, quality, reliability, and application suitability remain unchanged. Products before and after the change are fully interchangeable without impact to customer applications.

PRODUCT CHANGE NOTIFICATION

TO: Customers who may concern **FROM:** Product Marketing, CPC

HEREWITH YOU ARE INFORMED OF OUR INTENTION TO INTRODUCE THE MATRIX CLIP PACKAGING PROCESS FOR SELECTED SMB SERIES PRODUCTS.

DESCRIPTION:

To continuously enhance manufacturing capabilities and product quality consistency, as well as further optimize packaging processes and automation, YAGEO will introduce the **Matrix Clip packaging process** for selected SMB series products.

The Matrix Clip technology has been widely adopted across mainstream packaging platforms in the industry. By optimizing the internal interconnection structure and manufacturing process, this technology is designed to further improve process consistency, structural stability, and long-term reliability, while enhancing production automation efficiency and quality control capabilities.

This change represents a continuous optimization and upgrade of the product packaging process. It does not involve any changes to product functionality, electrical characteristics, key reliability requirements, package dimensions, or applicable standards. Products will continue to fully comply with the existing datasheet specifications and applicable quality standards.

The existing **Two-piece Structure** has been extensively proven in the market and has demonstrated mature and stable performance. The introduction of the **Matrix Clip Structure** is a further optimization based on this established technology, with the objective of providing improved manufacturing consistency and long-term quality assurance.

Starting **January 1, 2027**, YAGEO will gradually introduce products using the Matrix Clip Structure and begin shipments accordingly. During the transition period, products with either the existing **Two-piece Structure** or the new **Matrix Clip Structure** may be supplied. Both structures meet the same product specifications and quality requirements and can be used as direct replacements without affecting customers' existing designs, applications, or assembly processes.

Affected Product Series:

- SMBJ Series
- P6SMB Series
- 1.0SMB Series
- 1.5SMBJ Series

A detailed list of the affected part numbers is provided in the attachment for your reference.

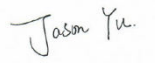
YAGEO remains committed to quality and customer satisfaction and will continue to advance product and manufacturing technologies to provide customers with stable and reliable products and services.

We sincerely appreciate your continued support and cooperation. Should you have any questions regarding this change, please contact your YAGEO sales representative.

REASONS: Product Process Upgrade

EXPECTED INFLUENCE ON PERFORMANCE: None

EXPECTED INFLUENCE ON QUALITY AND RELIABILITY:	None
CHANGE:	
Quality REPORTS available:	Available based on customers' request
SAMPLES available	Any sample request please kindly contact with our sales
Implementation date:	**Jan. 1, 2027**
Type identification after change:	Lot number
SUGGESTION FOR ALTERNATIVE PRODUCTS:	None

Quality Manager:	Product Manager:	Sales Manager:
Signature: 	Signature: 	Signature: 
Date:2026.09.30	Date: 2026.09.30	Date: 2026.09.30

FOR MORE INFORMATION, CONTACT:	YAGEO sales contact window
RETURN YOUR COMMENTS BEFORE:	Oct. 20, 2026
Remarks:	If customer has no feedback about this change before the customer response date, the change will be regarded as approved by customer automatically.
Comments:	
Date:	
Function:	
Signature:	