



To : Dear Valued Customers

## Product/Process Change Notice

We hereby submit PCN for your review and approval.

<p>Application or type :</p> <p>Datasheet for (A)CDBQx0240LR-HF.</p>																																																																																
<p>Detail of the change :</p> <p>Modify the electrical characteristics of the datasheet.</p>																																																																																
<p>Current : e.g. CDBQC0240LR-HF</p> <p><b>Electrical Characteristics</b> (at Ta=25°C unless otherwise noted)</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Parameter</th> <th>Conditions</th> <th>Symbol</th> <th>Min</th> <th>Typ</th> <th>Max</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Forward voltage</td> <td>I<sub>F</sub> = 10mA</td> <td>V<sub>F</sub></td> <td></td> <td></td> <td>0.35</td> <td>V</td> </tr> <tr> <td>I<sub>F</sub> = 100mA</td> <td>V<sub>F</sub></td> <td></td> <td></td> <td>0.48</td> <td>V</td> </tr> <tr> <td>I<sub>F</sub> = 200mA</td> <td>V<sub>F</sub></td> <td></td> <td></td> <td>0.58</td> <td>V</td> </tr> <tr> <td rowspan="2">Reverse current</td> <td>V<sub>R</sub> = 10V</td> <td>I<sub>R</sub></td> <td></td> <td></td> <td>0.5</td> <td>μA</td> </tr> <tr> <td>V<sub>R</sub> = 40V</td> <td>I<sub>R</sub></td> <td></td> <td></td> <td>5</td> <td>μA</td> </tr> <tr> <td>Capacitance</td> <td>f = 1 MHz, and 1 VDC reverse voltage</td> <td>C<sub>T</sub></td> <td></td> <td>12</td> <td></td> <td>pF</td> </tr> </tbody> </table>	Parameter	Conditions	Symbol	Min	Typ	Max	Unit	Forward voltage	I <sub>F</sub> = 10mA	V <sub>F</sub>			0.35	V	I <sub>F</sub> = 100mA	V <sub>F</sub>			0.48	V	I <sub>F</sub> = 200mA	V <sub>F</sub>			0.58	V	Reverse current	V <sub>R</sub> = 10V	I <sub>R</sub>			0.5	μA	V <sub>R</sub> = 40V	I <sub>R</sub>			5	μA	Capacitance	f = 1 MHz, and 1 VDC reverse voltage	C <sub>T</sub>		12		pF	<p>After the change : e.g. CDBQC0240LR-HF</p> <p><b>Electrical Characteristics</b> (at Ta=25°C unless otherwise noted)</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Parameter</th> <th>Conditions</th> <th>Symbol</th> <th>Min</th> <th>Typ</th> <th>Max</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Forward voltage</td> <td>I<sub>F</sub> = 100mA</td> <td>V<sub>F</sub></td> <td></td> <td></td> <td>0.48</td> <td>V</td> </tr> <tr> <td>I<sub>F</sub> = 200mA</td> <td>V<sub>F</sub></td> <td></td> <td></td> <td>0.58</td> <td>V</td> </tr> <tr> <td>V<sub>R</sub> = 40V</td> <td>I<sub>R</sub></td> <td></td> <td></td> <td>5</td> <td>μA</td> </tr> <tr> <td>Capacitance</td> <td>f = 1MHz, and 1 VDC reverse voltage</td> <td>C<sub>T</sub></td> <td></td> <td>25</td> <td>35</td> <td>pF</td> </tr> </tbody> </table>	Parameter	Conditions	Symbol	Min	Typ	Max	Unit	Forward voltage	I <sub>F</sub> = 100mA	V <sub>F</sub>			0.48	V	I <sub>F</sub> = 200mA	V <sub>F</sub>			0.58	V	V <sub>R</sub> = 40V	I <sub>R</sub>			5	μA	Capacitance	f = 1MHz, and 1 VDC reverse voltage	C <sub>T</sub>		25	35	pF
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<p>Reason for the change :</p> <p>Refer to the PCN210901 dated September 6, 2021 and the reliability test report dated September 1, 2021, modify the datasheet to ensure compliance with the electrical characteristics of the new Schottky wafer.</p>																																																																																
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## **Answer To PCN**

Please complete the form below duly signed and fax back to Comchip Technology Co.

Please select your answer 1. Approved this PCN 2. Approved this PCN with conditions 3. Disapproved this PCN	Date
	Responsibility By
Please specify the condition or explain the reason if you select 2 or 3.	


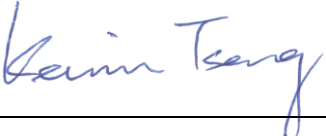
Unless a Comchip Technology Co., Ltd. Sales representative is contacted in writing within 30 days of the posting of this notice, all changes described in this announcement are considered approved.

**To : Dear Valued Customers**

**Product/Process Change Notice**

We hereby submit PCN for your review and approval.

<p>Application or type :</p> <p>The schottky product add new wafer supplier.</p>																						
<p>Detail of the change :</p> <p>Add new schottky product wafer supplier due to chip shortage.</p>																						
<p>Current :</p> <p>Wafer : MD1BIP614010 MD1BIP614020</p>	<p>After the change :</p> <p>Wafer : MT(D)1BIP611010 MT(D)1BIP611000</p>																					
<p>Reason for the change :</p> <p>This notification is to advise our customers that we will add new wafer supplier of schottky products to better support long-term demand for the affected products.</p> <p>Full electrical characterization and high reliability testing have been completed to ensure that it meets specifications and then modify the datasheet according to the qualification results. Reliability reports as attached file.</p>																						
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<p>Implemented from :</p> <p>Mar 31, 2022</p>																						

R&D Dept. Signature :  	QA Dept. Signature :  
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### **Answer To PCN**

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Please select your answer 1. Approved this PCN 2. Approved this PCN with conditions 3. Disapproved this PCN	Date  Responsibility By
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**Technology Co., Ltd.**

## Reliability Test Report

**Part NO.:** \_\_\_\_\_ **Part No. affected**  
**Diodes**

**Doc. No.** \_\_\_\_\_ **PCN210901**

**Date:** \_\_\_\_\_ **2021.09.01**

ComChip Technology Co., Ltd.

Add. : No. 586, Jianguo Rd., Yingge Dist.,  
New Taipei City 23943, Taiwan

Tel. : 886-2-8677-6675

### Reliability Test Summary

P / N : Part No. affected

Doc. No. : PCN210901

Application or type : The schottky product add new wafer supplier.

Detail of the change : Add new schottky product wafer supplier due to chip shortage.

No	Test Item	Test Condition	Test Foundation	Failure qty'	S.S	Test Results
1	Solderability	Dip in flux Time=5sec. Temp.of solder Pot=245±5°C Time= 5~10 sec.	MIL-STD-750 Method 2026	0	22	PASS
2	Soldering Heat	Temp of solder pot=260±5°C Time= 10~12 sec	MIL-STD-750 Method 2031	0	22	PASS
3	Temperature Cycle	Low Tstg to High Tstg dwelled for 30 min and transfer time not exceed 1 min; 20 cycles	MIL-STD-750 Method 1051	0	22	PASS
4	Steady State Operation Life Test	I=I <sub>o</sub> mA Time=168hrs.	MIL-STD-750 Method 1027	0	22	PASS
5	High Temperature Reverse Bias Life	VR= VR*80% Temp.(depend on product) Time 168hrs.	MIL-STD-750 Method 1038	0	22	PASS
6	Intermittent Forward Operation Life	I <sub>f</sub> = I <sub>o</sub> mA ON 1.5hrs/OFF 0.5hrs Test Time : 84Cycles	MIL-STD-750 Method 1036	0	22	PASS
7	Pressure Cooker Test	T <sub>a</sub> = 121°C Pressure= 15 Psi Time= 4 hrs	JESD 22-A102	0	22	PASS
8	High Temperature Storage Life	T <sub>a</sub> = High Tstg. Time= 168 hrs	MIL-STD-750 Method 1031	0	22	PASS
9	Humidity	T <sub>a</sub> = 85 °C RH= 85% Time=168 hrs	EIAJ ED-4701	0	22	PASS

Conclusion:

1.共有 9 項實驗

2.測試結果 : PASS

Approval: Zeus Lai

Prepare: Judy Lin



**Technology Co., Ltd.**

## **Reliability Test Report**

**Product.:** Part No. affected

**Doc. No.** PCN210901

**Date:** 2021.09.01

ComChip Technology Co., Ltd.

Add. : No. 586, Jianguo Rd., Yingge Dist.,  
New Taipei City 23943, Taiwan

Tel. : 886-2-8677-6675

# Comchip Technology Co., Ltd.



## Discrete Semiconductor Component Qualification Plan

Supplier Internal P / N : Part No. affected  
 Supplier : Comchip  
 User Component Engineer : Judy Lin  
 General Specification : AEC-Q101 Rev-D Table 3: Process Change Guidelines for the Selection of Tests  
 Supplier Manufacturing Site : Yingge, Taiwan  
 Application or type : The schottky product add new wafer supplier.  
 Detail of the change : Add new schottky product wafer supplier due to chip shortage.

Required PPAP Submission Date : 2021/9/1

Doc. No. : PCN210901

Item	Test	Test Conditions	Test Foundation	S. S.	Remarks
1	TEST	Electrical characterization @25C	SPEC.	572	PASS
2	Preconditioning	Ta= 125°C Time= 24 hrs Ta= 85 °C RH= 85% Time = 168 hrs 3 reflow cycles	JESD22 A-113	308	PASS
3	External Visual	per AEC-Q101	SPEC.	572	PASS
4	HTRB	Reverse Biased @ 100% V Ta= Tj. Test Time=1000 hrs	MIL-STD-750 M1038 Method A	77	PASS
5	Temperature Cycling	Tamin = -55°C to Tamax150°C dwelled for 5 min, Cycle = 1000	JESD22 A-104	77	PASS
6	Autoclave	Ta = 121°C, P = 15psig, RH = 100% Test Time=96hrs	JESD22 A-102	77	PASS
7	H3TRB	Reverse Biased @ 80% V Ta= 85 °C, RH= 85% Test Time=1000 hrs	JESD22 A-101	77	PASS
7a	HAST	Reverse Biased @ 80% V Ta= 130 °C, RH= 85% Test Time=96 hrs	JESD22 A-110		
8	IOL	$\Delta T_J \geq 100^\circ C$ , On/Off = 2 minutes, cycles = 15,000	MIL-STD-750 Method 1037	77	PASS
9	HTSL	Ta= Ts°C. Time= 1000 hrs	JESD22 A-103	77	PASS
10	ESD	CDM  HBM	AEC Q101-001 and 005	60	PASS
11	DPA	per AEC-Q101	AEC-Q101-004 Section 4	2	PASS



# Comchip Technology Co., Ltd.



## Discrete Semiconductor Component Qualification Plan

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Supplier : Comchip  
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Required PPAP Submission Date : 2021/9/1

Doc. No. : PCN210901

Item	Test	Test Conditions	Test Foundation	S. S.	Remarks
12	Physical Dimension	per AEC-Q101	JESD22 B-100	30	PASS
13	Resistance to Solder Heat	Solder Pot Temp. 260±5°C Duration 4-6 sec	JESD22 A-111	30	PASS
14	Solderability	Solder Pot Temp. 245±5°C Duration 5-10 sec	JESD22 B-102	10	PASS
15	Thermal Resistance	per AEC-Q101	JESD24-3, 24- 4, 24-6 as appropriate	10	PASS
16	Wire Bond Strength	per MIL-STD-750 Method 2037	MIL-STD-750 Method 2037	5	PASS
17	Bond Shear	per AEC-Q101-003	AEC-Q101-003	5	PASS
18	Die Shear	per MIL-STD-750 Method 2017	MIL-STD-750 Method 2017	5	PASS

Conclusion:

1. The total test had 18 item of reability test.
2. There were test result of pass.

Notes:

7 & 7a choose one

Approval: Zeus Lai

Prepare: Judy Lin