AEC Q100 and 006 **RELIABILITY TEST REPORT**

Automotive Grade Level = 2 -40 to $+105^{\circ}$ MSL= 3

Location	8F, Buiding 4D, Shenzhen Software Industry
	Base, Nanshan District, Shenzhen, P.R. China
Name of Client	Shenzhen Goodix Technology Co., Ltd
Client Address.TE	EL +86-755-33338828
Device Name	GR5405BENE
Lot number	2411-A058/2412-A017/2412-A108
Package Type	QFN
Test Method	Refer to AEC-Q100 Rev-J-2023
\mathcal{A}	Refer to AEC - Q006 - Rev – A-2016
Receipt date	2024/04/09
Test period	2024/04/09~2024/06/11
Report date	2024/06/17
Test Results	PASS
Prepared Sic	ZHAOLIPING
By N	ame:赵莉苹< Engineer >
	GULF LEENG
Reviewed Sig	gnature :
By N	ame:顾磊峰< Supervisor >
Approved Cigr	LI LI (L'A) A
Approved Sign	
By N	ame : 李丽< Manager >
	检测专用章
Accreditation & C	<u>Certificates</u>

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Certified by ISO 9001 and IECQ 17025.

Certified by ISO 27001 and ISO 15408.

IECQ Certificate No : IECQ-L ULTW 16.0003-03



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- 2004 Certified by ISO 9001 and IECQ 17025.
- 2006 Elected as the Distinguished Enterprise by the Industry Development Bureau (IDB).
- 2006 Awarded #32 in the Taiwan Top 50 and #157 in the Asia Top 500 Fastest Growing Companies by Deloitte.
- 2008 Awarded the best performance company of Industrial Excellence Award by the Economy Ministry's Industry Development Bureau (IDB).
- 2009 Listed on the Taiwan OTC market (3587)
- 2012 Awarded #474 in the Asia Top 500 Fastest Growing Companies by Deloitte.
- 2013 A+ companies in Taiwan by Global Views Monthly Magazine.
- 2015 Certified by ISO 27001.
- 2022 Certificated by CNAS-CL01







ISO/IEC 27001

IECQ 17025

CNAS-CL01

ISO 9001



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Background Information

1.1 Client Information

Company : Shenzhen Goodix Technology Co., Ltd

Sample Name	GR5405BENE	Sample size	3565ea
Lot number	2411-A058/2412-A017/2412- A108	Test Method	AEC-Q100 Rev-J-2023 AEC - Q006 - Rev – A-2016
Top View		Bottom View	
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1.2 Pass/Fail Criteria

After test, there is no abnormal finding during visual inspection.

Functional test will be conducted by client, and the test results pass as below.

2 Testing Summary

#	Stres s	Condition	Test Method	Lots	S.S	Results
A1	PC (MSL 3)	-40°C~60°C Ramp Time: 5mins Duration:5 cycles Bake: 125°C 24 hours Soak: 30°C / 60%RH 192 hours Reflow: Peak temp.: 260°C Time within 5 °C of the peak temp: at least 30 sec Duration: 3 times	JESD22-A113I J-STD-020E	3	231	PASS
A2	HAST	130°C/85%RH/96hours DPS=3.6V	JEDEC JESD22-A110E	3	77	PASS
A2	HAST	130°C/85%RH/192hours DPS=3.6V	JEDEC JESD22-A110E	3	70	PASS
A3	UHAS T	Temperature: 130°C Humidity: 85%R.H Duration: 96 hours	JEDEC JESD22-A118B	3	77	PASS
A4	тс	-65°C~150°C Ramp Time: 5mins Duration:500 cycles	JEDEC JESD22-A104F	3	77	PASS
A4	тс	-65°C∼150°C Ramp Time: 5mins Duration:1000 cycles	JEDEC JESD22-A104F	3	70	PASS
A6	HTSL	Temperature: 150°C Duration: 500 hours	JEDEC JESD22-A103E	3	45	PASS
A6	HTSL	Temperature: 150°C Duration: 1000 hours	JEDEC JESD22-A103E	3	44	PASS
B1	HTOL	Ta=105°C 1000 hours	JEDEC	3	77	PASS



		DPS=3.6V	JESD22-A108G			
B2	ELFR	Ta=105℃ 48 hours DPS=3.6V	AEC Q100-008	3	800	PASS
В3	EDR	Ta=105℃ · Cycling 100K ; DPS=3.6v	AEC-Q100-005	6	77	PASS
В3	EDR	Ta=25℃ · Cycling 100K ; DPS=3.6v	AEC-Q100-005	3	77	PASS
B3	HTDR	Ta=150°C · 1000hrs	AEC-Q100-006	3	77	PASS
B3	LTDR	Ta=-40°C · 1000hrs	AEC-Q100-007	3	77	PASS
C1	WBS	Wire Bond Sheer Test:(Cpk>1.67)	AEC Q100-001 AEC-Q003	30 bond s	5 part s	PASS
		Wire Bond Pull	MIL-STD883	30	5	
C2	WBP	Test:(Cpk>1.67)	Method 2011 AEC-Q003	bond s	part s	PASS
СЗ	SD	Solderability:(>95% coverage)	JESD22-B102 JSTD-002E	1	15	PASS
C4	PD	Physical Dimensions:(Cpk>1.67)	JESD22-B100 JESD22 B108 AEC-Q003	3	10	PASS
D1	EM	CU process	TSMC automotive SPEC			PASS
D2	TDDB	N&PMOS	TSMC automotive SPEC			PASS
D3	HCI	N&PMOS	TSMC automotive SPEC			PASS
D4	BTI	PMOS	TSMC automotive SPEC			PASS
D5	SM	CU process	TSMC automotive SPEC			PASS
E1	TEST	0 Fails	Test program to supplier data sheet or user specification	ALL	ALL	PASS
E2	НВМ	±500V/±1000V/±2000V	AEC-Q100-002	1	24	ESD Level=2
E3	CDM	All pins:±250V/±500V	AEC Q100-011	1	9	ESD Level=C2a



		Corner pins:±750V				
E4		±50mA~±200mA,step:±5	AEC Q100-004			
	Latch-	0mA			10	DASS
	Up	&MS∨			10	FA35
		Class I&II, 25°C&105°C				
E5	ED	Test @ RHC CPK			77	DASS
		>1.67	AEC Q100-009 AEC Q003	3	11	FAOD
50	FG	FG shall be=or >	AEC Q100-007			00.089/
EO		98% for qual units				99.90%
E7	Char		AEC Q003			Report Available
E9	EMC	150 KHz to 1GHz	SAE J1752/3	1	1	EMC Level=L12m
F1	PAT	Has PAT been estabis				Implemented
		hed for this part				Implemented
F2	SBA	Has SBYA been estab				Implemented
		lished for this				implemented

*Test data is provided by customer.D1,D2,D3,D4,D5,E1,E5,E6,E7,F1,F2

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