

Fuse On-Going Reliability Test Summary Report - 0AKCX Fuse series

Fuse Type and Rating : 0AKCX 630A

Production Lot Number : ENG'samples

Project Number : FPQ-161

Fuse Part Number : 0AKCBK630-BA

Reference	Test Description	Testing Condition	Acceptance Criteria	Result
UL248-1	Cold resistance	Ambient Temperature 25+/-5°C current <10% In, measure with specified fixture	Record the real data	12/12 pass
ISO8820-8 JSAE JASO D622	Temperature rise test	Apply 0.5 In test current at Ambient temperature:25±5°C	The temperature rise shall not exceed 50K	2/2 pass
JASO D622 6.3.4.1	Temperature and humidity cycle	Temp.: -40°C ~ +120°C, each cycle 24hrs, total 10 cycles	No appearance damage, Rc change <10%	2/2 pass
ISO8820-8 JASO D622 6.3.6	Thermal shock resistance test	Temp.: -40°C~ +100°C, each cycle 1hr, total 48 cycles	No appearance damage, Rc change <10%	2/2 pass
User-defined	High temperature storage test	Put samples in 125°C for 100 hours	No appearance damage, Rc change <10%	2/2 pass
UL248-20 IEC 60068-2-64	Vibration durability test	Random vibration condition C: RMS: 30.2m/s ² 3 directions 8hrs per direction	No appearance damage, Rc change <10%	2/2 pass
JASO D622 6.3.2	Transient current intermittent cycle durability test	One cycle contains a current of 2In/0.25sec, and follow by current of 0.5In/9.75sec, total 50000cycles	No appearance damage, Rc change <10%	2/2 pass
GB/T31465.1-5.4	Wipe with petrol and lubricant	Wipe the marking with petrol and lubricant for 30 seconds	The marking still legible	2/2 pass
JSAE JASO D622 ISO8820-8	Terminal strength test	Install and dismantle fuse with 20+/-1Nm, Install and dismantle fuse three times	The fuse shall remain physically intact	12/12 pass

Reported By: Hongguo Hu

Approved by: Simon Chiu

Test Complete Date: Nov 27 , 2020

Cold resistance

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Fuse Part Number : 0AKCBK630-BA

Condition : UL248-1

Ambient Temperature 25+/-5°C current <10% In, measure with specified fixture

Type:	0AKCX 630A					
Start Date:	11/9/2020			End Date:	11/11/2020	
Room Temp.:	23.5	°C		Room Humi.:	41	%
No.\Name	Cold Resistance	Visual Check	No.\Name	Cold Resistance	Visual Check	
Unit:	mΩ		Unit:	mΩ		
Upper Limit:		No Visual Damage	Upper Limit:		No Visual Damage	
Lower Limit:			Lower Limit:			
1	0.1605	pass	7	0.1606	pass	
2	0.1626	pass	8	0.1635	pass	
3	0.1623	pass	9	0.1637	pass	
4	0.1638	pass	10	0.1633	pass	
5	0.1637	pass	11	0.1648	pass	
6	0.1624	pass	12	0.1634	pass	

Temperature rise test

Fuse Type and Rating : 0AKCX 630A

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Project Number : FPQ-161

Fuse Part Number : 0AKCBK630-BA

Condition : ISO8820-8JSAE JASO D622

Apply 0.5 In test current at Ambient temperature:25±5°C

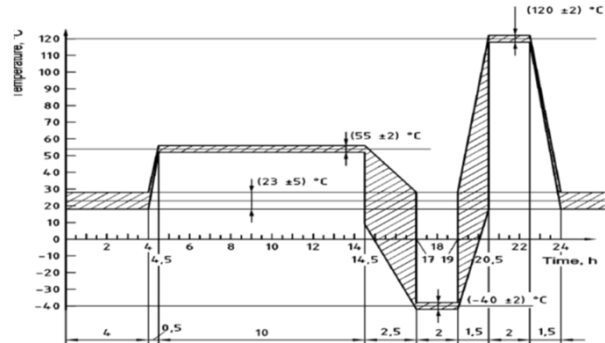
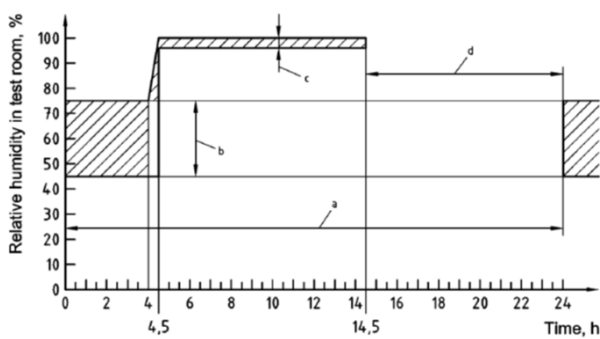
Type:	0AKCX 630A					
Start Date:	11/9/2020			End Date:	11/11/2020	
Room Temp.:	23.5	°C		Room Humi.:	41	%
No.\Name	Temperature rise @0.5In	Visual Check	No.\Name	Temperature rise @0.5In	Visual Check	
Unit:	K		Unit:	K		
Upper Limit:	50	No Visual Damage	Upper Limit:	50	No Visual Damage	
Lower Limit:			Lower Limit:			
1	46.5	pass	2	45.9	pass	

Temperature and humidity cycle

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Condition : JASO D622 6.3.4.1

Temp.: -40°C ~ +120°C, each cycle 24hrs, total 10 cycles



Type:	0AKCX 630A					
Start Date:	11/12/2020			End Date:	11/24/2020	
Room Temp.:	21.3	°C		Room Humi.:	45	%
No.\Name	Cold Resistance	Visual Check	No.\Name	Cold Resistance	Visual Check	
Unit:	mΩ		Unit:	mΩ		
Upper Limit:	0.1785	No Visual Damage	Upper Limit:	0.1802	No Visual Damage	
Lower Limit:	0.1461		Lower Limit:	0.1474		
3	0.1625	pass	4	0.1646	pass	



Thermal shock resistance test

Fuse Type and Rating : 0AKCX 630A

Production Lot Number : ENG'samples

Project Number : FPQ-161

Fuse Part Number : 0AKCBK630-BA

Condition : ISO8820-8JASO D622 6.3.6

Temp.: -40°C~ +100°C, each cycle 1hr, total 48 cycles

Type:	0AKCX 630A					
Start Date:	11/16/2020			End Date:	11/20/2020	
Room Temp.:	23.8	°C		Room Humi.:	49	%
No.\Name	Cold Resistance	Visual Check	No.\Name	Cold Resistance	Visual Check	
Unit:	mΩ		Unit:	mΩ		
Upper Limit:	0.1801	No Visual Damage	Upper Limit:	0.1786	No Visual Damage	
Lower Limit:	0.1473		Lower Limit:	0.1462		
5	0.1640	pass	6	0.1632	pass	

High temperature storage test

Fuse Type and Rating : 0AKCX 630A

Production Lot Number : ENG'samples

Project Number : FPQ-161

Fuse Part Number : 0AKCBK630-BA

Condition : User-defined

Put samples in 125°C for 100 hours

Type:	0AKCX 630A					
Start Date:	11/13/2020			End Date:	11/20/2020	
Room Temp.:	23.8	°C		Room Humi.:	49	%
No.\Name	Cold Resistance	Visual Check	No.\Name	Cold Resistance	Visual Check	
Unit:	mΩ		Unit:	mΩ		
Upper Limit:	0.1767	No Visual Damage	Upper Limit:	0.1799	No Visual Damage	
Lower Limit:	0.1445		Lower Limit:	0.1472		
7	0.1628	pass	8	0.1651	pass	



Vibration durability test

Fuse Type and Rating : 0AKCX 630A

Production Lot Number : ENG'samples

Project Number : FPQ-161

Fuse Part Number : 0AKCBK630-BA

Condition : UL248-20IEC 60068-2-64

Random vibration condition C:

RMS: 30.2m/s²

3 directions

8hrs per direction

Type:	0AKCX 630A					
Start Date:	11/17/2020			End Date:	11/20/2020	
Room Temp.:	23.8	°C		Room Humi.:	49	%
No.\Name	Cold Resistance	Visual Check	No.\Name	Cold Resistance	Visual Check	
Unit:	mΩ		Unit:	mΩ		
Upper Limit:	0.1801	No Visual Damage	Upper Limit:	0.1796	No Visual Damage	
Lower Limit:	0.1473		Lower Limit:	0.1470		
9	0.1648	pass	10	0.1633	pass	

Transient current intermittent cycle durability test

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Condition : JASO D622 6.3.2

One cycle contains a current of $2I_n/0.25\text{sec}$, and follow by current of $0.5I_n/9.75\text{sec}$, total 50000cycles

Type:	0AKCX 630A					
Start Date:	11/16/2020			End Date:	11/24/2020	
Room Temp.:	21.3	°C		Room Humi.:	45	%
No.\Name	Cold Resistance	Visual Check	No.\Name	Cold Resistance	Visual Check	
Unit:	mΩ		Unit:	mΩ		
Upper Limit:	0.1813	No Visual Damage	Upper Limit:	0.1797	No Visual Damage	
Lower Limit:	0.1483		Lower Limit:	0.1471		
11	0.1672	pass	12	0.1659	pass	

Wipe with petrol and lubricant

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Fuse Part Number : 0AKCBK630-BA

Condition : GB/T31465.1-5.4

Wipe the marking with petrol and lubricant for 30 seconds

Type:	0AKCX 630A					
Start Date:	11/27/2020			End Date:	11/27/2020	
Room Temp.:	21.2	°C		Room Humi.:	48	%
No.\Name	Marking still legible		No.\Name	Marking still legible		
2	pass		8	pass		
4	pass		10	pass		
5	pass		11	pass		

Terminal strength test

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Fuse Part Number : 0AKCBK630-BA

Condition : JSAE JASO D622ISO8820-8

Install and dismantle fuse with 20+/-1Nm, Install and dismantle fuse three times

Type:	0AKCX 630A					
Start Date:	11/27/2020			End Date:	11/27/2020	
Room Temp.:	21.2	°C		Room Humi.:	48	%
No.\Name	The frequency of Install and dismantle	Visual Check	No.\Name	The frequency of Install and dismantle	Visual Check	
Unit:			Unit:			
Upper Limit:		No Visual Damage	Upper Limit:		No Visual Damage	
Lower Limit:	3		Lower Limit:	3		
1	>3	pass	7	>3	pass	
2	>3	pass	8	>3	pass	
3	>3	pass	9	>3	pass	
4	>3	pass	10	>3	pass	
5	>3	pass	11	>3	pass	
6	>3	pass	12	>3	pass	