

REM 064 One Piece Tab

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1. SCOPE

1.1. Content

This specification covers the performance, test and quality requirements of REM 064 one piece tab contact system.

1.2. Qualification

When tests are performed for REM 064 one piece tab, the following defined specifications and standards must be used. All inspections must be performed using the applicable inspection plan and product drawing. The basic qualification is done according to LV214: 2010-04.

2. REFERENCED DOCUMENTS

The following mentioned documents, if they are referred to, are part of this specification. In case of conflicts between the requirements of this specification and the referenced documents, this specification takes precedence. In case of discrepancies between both languages the English text is valid.

2.1. TE Connectivity documents

109-1 General requirement for test specification

Customer drawings

C-2327063 REM 0.64 TAB TERMINAL UNSEALED

Application specification

114-101042 REM 0.64 one piece tab application specification.

2.2. General documents

DIN IEC60512 Electromechanical components for electronic equipment, basic testing procedures and methods in engagement.

DIN EN 60068 Environmental testing

DIN EN 60352 Solderless connections – Part 2: Crimped connections - General requirements, test methods and practical guidance

LV214 Motor vehicle connectors test specification 2010-03

1. 范围

1.1 内容

这份规格书包含了 REM 0.64 one piece tab 产品的性能，测试和品质的要求。.

1.2 验证

需要按照如下的规格及标准进行产品测试。按照可适用的检查计划和产品图执行所有的检验项目，基本测试规范为 LV214: 2010-04.

2. 参考文件

下面的文件提到（如果被参考的），是本规范的一部分。在本规范的要求和引用的文件之间的冲突的情况下，此规范优先。若描述有冲突情况下，英文优先。

2.1 TE Connectivity 文件

109-1 通用测试规范。

客户图

C-2327063 REM 0.64 非防水 TAB 端子

应用规范

114-101042 REM 0.64 非防水 TAB 端子应用规范

2.2 通用文件

DIN IEC60512 电子设备用机电元件、基本试验程序和方法参与

DIN EN 60068 环境测试

DIN EN 60352 无焊接压接连接零件测试方法和实践指导的一般要求—Part 2

LV214 汽车连接器试验指南
2010-03

3. DESCRIPTION

3.1. Contact design

Design and dimensions of the REM 064 one piece tab terminals conform to the drawings and are checked according to the TE Connectivity quality guidelines.

The REM 064 terminal is a one piece 0.64*0.64mm tab terminal with spring, The spring has one locking lance for first lock in the contact cavity.

REM 064 one piece terminal is available with unsealed terminal, see figure 2

Suitable mating parts are MQS 064 series terminals. They have to conform to specification 114-94201.

The cavity pitch for terminals with insulation crimp is 2,54 x 2,54mm.

3.2. Materials

Information about this can be found on customer drawing.

4. REQUIREMENTS

4.1. General requirements

The crimp quality has to be according to the TE specifications.
Specified TE applicators must be used.
The samples must be free of visible damage.
Terminals must comply with the current drawing.
For testing only serial parts must be used.

Movement rate for mechanical tests: 50mm/min.
Application of the contacts to Spec. 114-101042

4.2. Characteristic data

Voltage:
Acc. to IEC 60 664 –1 (DIN VDE 0110)
Current carrying capability: max. 7.5A
see derating curves, Diagram 1

Durability (max mating cycles)
10 cycles

Temperature range : *)
- 40 bis 105°C

*) Ambient temperature and heating up by current.
Limit temperature of wire and housing
≥ limit temperature of application

3. 描述

3.1 端子设计

REM 064 one piece tab terminals 设计及尺寸 遵从图纸, 通过 TE Connectivity 品质指导书进行确认

此 REM 064 端子为带弹片的 0.64*0.64mm 一件式公端子, 弹片在端子塑壳配合中作为的一次锁作用.

此 REM 064 端子为非防水端子, 见图示 2.

配对母端子为 MQS 064 系列端子,需与 114-94201 规范相符。

应用塑壳型腔 pitch 为 2.54*2.54mm。

3.2 材料

产品客户图有对应的材料描述。

4. 要求

4.1 常规要求

压接品质需遵循压解规范,
必须使用指定的压接卡模.
压接过程中样品不可被破坏
端子需与当前图纸版本匹配.
测试必须使用量产状态的端.

机械测试的运动速度: 50mm/min.
端子应用规范: 114-101042

4.2 特征数据

电压
依据 IEC 60 664 –1 (DIN VDE 0110)
载流能力: 最大 7.5A
见附件载流曲线, 图表 1

耐久插拔(最大插拔次数)
10 次

温度范围: *)
- 40 ~ 105°C

*) 环境温度与温升的总和。
线缆的耐温性及塑套的耐温性要高于端子的耐温性。

4.3. Test requirements and procedure

4.3 测试要求及步骤

Test description / 测试描述	Test requirement / 测试要求	Test procedure / 测试步骤
Receiving inspection and testing 样品外观检验与测试(PG 0) Visual inspection / 外观检验 Contact resistance in contact area / 端子接触电阻 Crimp resistance / 压接电阻	$R_K \leq 3m\Omega$ 0,22mm ² - 0,35mm ² : $R_{crimp} \leq 1,5m\Omega$ 0,50mm ² - 0,75mm ² : $R_{crimp} \leq 1,0m\Omega$	DIN EN 60512-1-1 / LV214-E0.1 DIN EN 60512-2-1 / LV214-E0.2.1 Measuring points see Fig.1 量测方法见图 1 DIN EN 60512-2-1 Measuring points see Fig.1 量测方法见图 1
Contact overlap / 接触区域接合长度(PG 4)	$\geq 1,0mm$ (depends on tab and housing design) (依据端子与塑壳设计)	theoretical proof / 理论证明
Contact retention force out of cavity / 端子保持力(PG 8)	$F_{prim} \text{ (Locking lance)} > 55N$ $F_{sek} > 55N$	Acc. IEC 60512-8, Test 15b 依据 IEC 60512-8, Test 15b Test speed 50mm/min 测试速度 50mm/min Test with steel cavity: T05-1258 测试使用不锈钢治具 T05-1258

Test description / 测试描述	Test requirement / 测试要求	Test procedure / 测试步骤
Conductor pull out strength / 导线拉拔力(PG 10) Visual inspection / 外观检验 Conductor pull out strength (insulation crimp inactive)/ 导线拉拔力 (不包括绝缘皮部分)	0,22mm ² : ≥ 30N 0,35mm ² : ≥ 50N 0,50mm ² : ≥ 60N 0,75mm ² : ≥ 85N	DIN EN 60512-1-1 / LV214-E0.1 LV214-E10.1
Insertion and removal forces, mating cycle frequency / 端子插拔力及耐久插拔 (PG 11) Visual inspection / 外观检验 Mating and unmating forces / 插拔力 Mating cycles / 耐久插拔	Mating / 插入: 1.5N≤F≤5N Unmating / 拔出: 1.0N≤F≤5N Insertion cycles / 插拔次数 Sn = 10 Max.	Mating pair with part 928999-1 使用端子 928999-1 配对插拔力测试 DIN EN 60512-1-1 / LV214-E0.1 LV214-E11.1
Current temperature rise, derating(without housing) / 温升及载流(未装配塑壳) (PG 12)	See derating curve, diagram 1 见附件图表 1	DIN EN 60512-5-2 / LV214-E12.2
Thermal time constant / 电流过载 测试 (PG 14) Visual inspection / 外观检验 Thermal time constant / 电流过载测试		DIN EN 60512-1-1 / LV214-E0.1 LV214-E14.1

Test description / 测试描述	Test requirement / 测试要求	Test procedure / 测试步骤
Electrical stress test / 电应力测试(PG 15) Visual inspection / 外观检验 Contact resistance / 电阻测试 Derating (without housing) / 载流 (无塑壳) Temperature cycle endurance test, current cycle endurance test / 温度及电流耐久循环测试 Humid heat, cyclic (variant 1) / 温湿循环 (条件 1)	LV214 appendix D $\leq 30\text{m}\Omega$ (0.22mm ²) $\leq 15\text{m}\Omega$ (0.35~0.75mm ²) (Maximum limits of the contact resistance in m Ω at room temperature after aging)	DIN EN 60512-1-1 / LV214-E0.1 DIN EN 60512-2-1 / LV214-E0.2 Measuring points see Fig.1 量测方法见图 1 DIN EN 60512-5-2 / LV214-E12.2 LV214-B15.2 DIN EN 60068-2-30 / LV214-B15.3
Dynamic Load Vibration / 振动测试(PG 17) Visual inspection / 外观检验 Contact resistance / 电阻测试 Dynamic load, road-band random vibration / 载流随机振动测试	LV214 appendix D $\leq 30\text{m}\Omega$ (0.22mm ²) $\leq 15\text{m}\Omega$ (0.35~0.75mm ²) (Maximum limits of the contact resistance in m Ω at room temperature after aging) Severity 1: Sn unsealed Permissible interruption < 1 μ s (Contact resistance exceeds 7 Ω) (接触阻抗大于 7 Ω) Must no function-relevant damage occur. 必须无功能相关的破坏出现。	DIN EN 60512-1-1 / LV214-E0.1 DIN EN 60512-2-1 / LV214-E0.2 Measuring points see Fig.1 量测方法见图 1 DIN EN 60068-2-64 / LV214-B17.2 applicable vibration severity 1, 振动等级 1

Coastal climate load / (PG 18A) 沿海气候环境测试 Visual inspection / 外观检验 Contact resistance / 电阻测试 Salt spray, cyclic / 循环盐雾测试	LV214 appendix D $\leq 30\text{m}\Omega$ (0.22 mm²) $\leq 15\text{m}\Omega$ (0.35~0.75 mm²) (Maximum limits of the contact resistance in mΩ at room temperature after aging) Severity 3 / 等级 3	DIN EN 60512-1-1 / LV214-E0.1 DIN EN 60512-2-1 / LV214-E0.2 Measuring points see Fig.1 量测方法见图 1 DIN EN 60068-2-52 / LV214-B18.2
Longterm temperature duration test / (PG 21) 老化测试 Visual inspection / 外观检验 Contact resistance / 电阻测试 Aging in dry heat / 热老化测试	LV214 appendix D $\leq 30\text{m}\Omega$ (0.22 mm²) $\leq 15\text{m}\Omega$ (0.35~0.75 mm²) (Maximum limits of the contact resistance in mΩ at room temperature after aging)	DIN EN 60512-1-1 / LV214-E0.1 DIN EN 60512-2-1 / LV214-E0.2 Measuring points see Fig.1 量测方法见图 1 DIN EN 60068-2-2 Test B / LV214-B21.1

4.4. Test sequence

The qualification inspection must be performed in the order as specified in the following table.

4.4 测试顺序

测试顺序必须在指定的顺序执行下表中。

	Receiving inspection and testing / 样品接受检验与测试	Mechanical and thermal relaxation behavior / 机械与热应力释放测试	Contact retention force / 端子保持力	Conductor pull-out strength / 导线拉拔力	Insertion and removal forces, mating cycle frequency / 插拔力, 循环插拔	Current temperature rise, derating (withouth housing) / 温升, 载流 (无塑壳)	Thermal time constant / 电流过载测试
Visual inspection / 外观检验	1	1, 3	1, 3	1, 3	1, 3	1, 3	1, 3
Contact resistance / 电阻测试	2						
Contact retention force / 端子保持力			2				
Conductor pull-out strength / 导线拉拔力				2			
Insertion and removal forces, mating cycle frequency / 插拔力, 循环插拔					2		
Derating /PG12 温升测试						2	
Aging in dry heat / 热老化		2					
Thermal time constant / 电流过载测试							2

	Electrical stress test / 电子应力测试	Dynamic stress / 振动测试	Coastal climate load / 沿海气候环境测试	Longterm temp. duration test / 老化测试
Visual inspection / 外观检验	1, 9	1, 4, 6, 8	1, 5	1, 5
Contact resistance / 电阻测试	2, 7,	2, 9	2, 4	2, 4
Derating / 温升测试	3, 8			
Contact resistance continuous (testing current) / 持续通电	4, 5, 6	3, 5, 7		
Temperature cycle endurance test, current cycle endurance test / 温度及电流耐久循环测试	4, 6			
Humid heat, cyclic (variant 1) / 温湿循环 (等级 1)	5			
Dynamic load, broad band random vibration / 随机振动测试		5		
Mechanical shock test / 机械冲击测试		7		
Resonance frequency of the contact assembly / 端子组装共振测试		10		
Salt spray, cyclic 盐雾循环			3	
Temperature shock 温度冲击				
Temperature cycling 温度循环				
Aging in dry heat / 热老化测试				3

5. ATTACHEMENTS

5.1. Derating curves

5. 附件

5.1 载流曲线

REM 0.63 one piece tab

RECEPTACLE : PN 0-928999-1 (0,22,0,35mm²) / PN 0-963715-1 (0,5mm²; 0,75mm²)

MATERIAL : CuNiSi

SURFACE : Sn

CONDUCTOR : FLR *

PIN CONTACT : PN 2297494-1 (0,22mm²; 0,35mm²) / PN 0-2293362-1(0,5mm²;0,75mm²)

MATERIAL : CuZn30

SURFACE : Sn

CONDUCTOR : FLR *

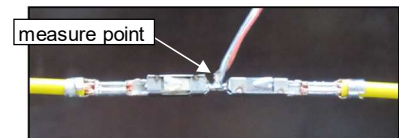
HOUSING : NOT APPLICABLE

TEST SETUP : SINGLE-WIRE IN FREE AIR

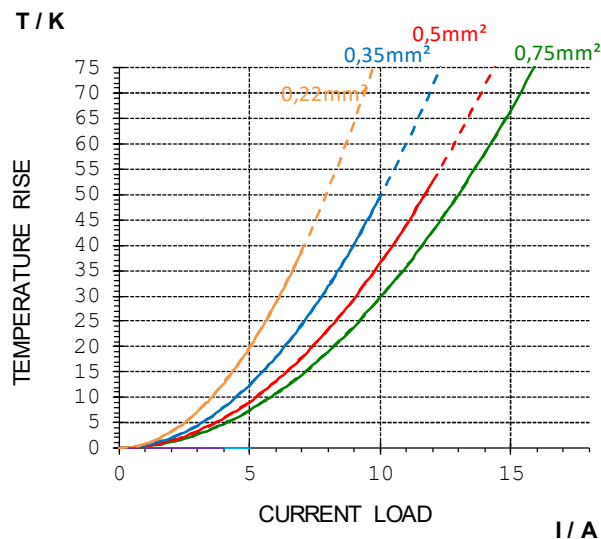


TEST REPORT

TEST COMPETENCE CENTER CHINA



TEMPERATURE RISE



DERATING-CURVE

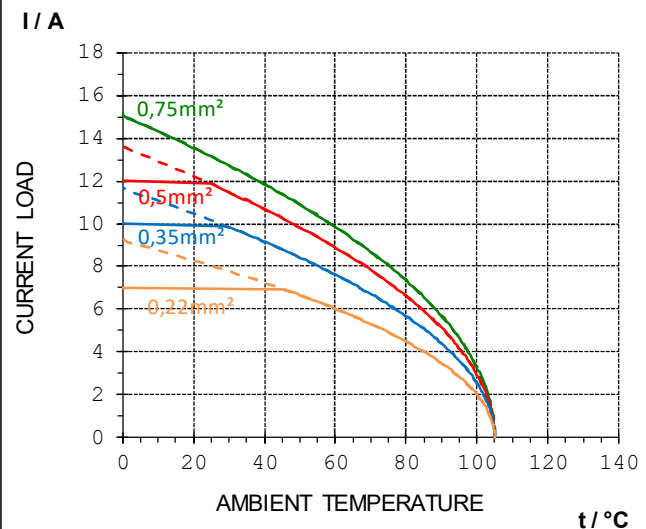


Diagram 1 / Diagramm 1

5.2. Test default

5.2 如图所示

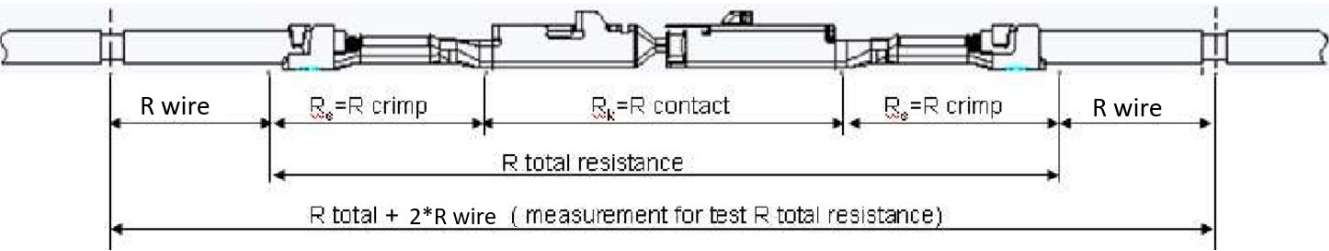


Fig. 1/ 图 1

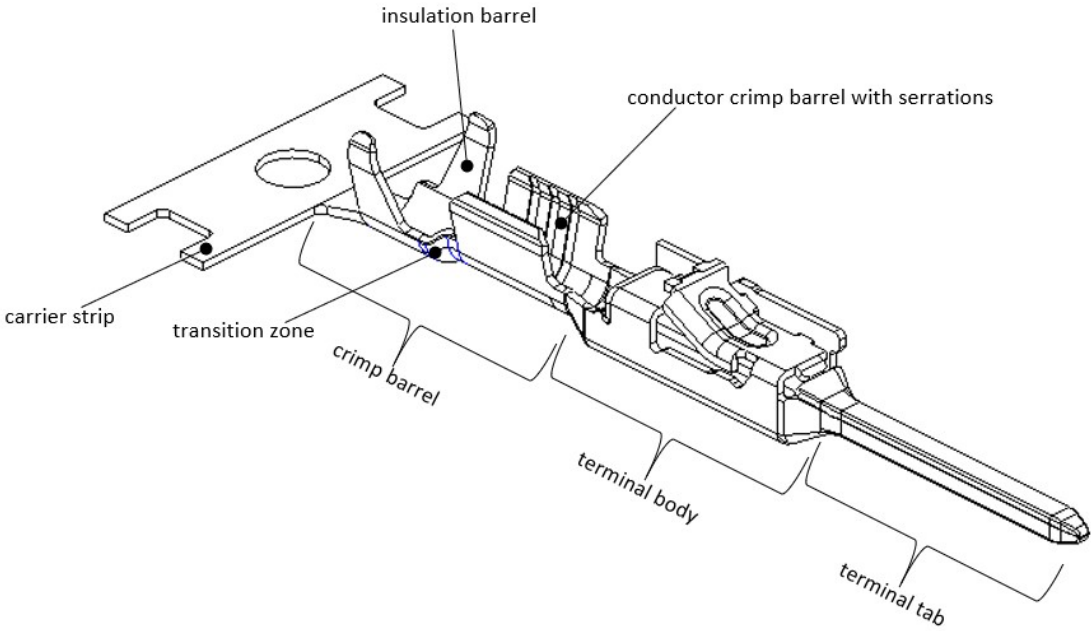


Fig. 2/ 图 2

LTR	REVISION RECORD	DWN	CHK	APP	DATE
A	General Spec. Published	J.GU	E.JIANG	I.YIN	JAN2019