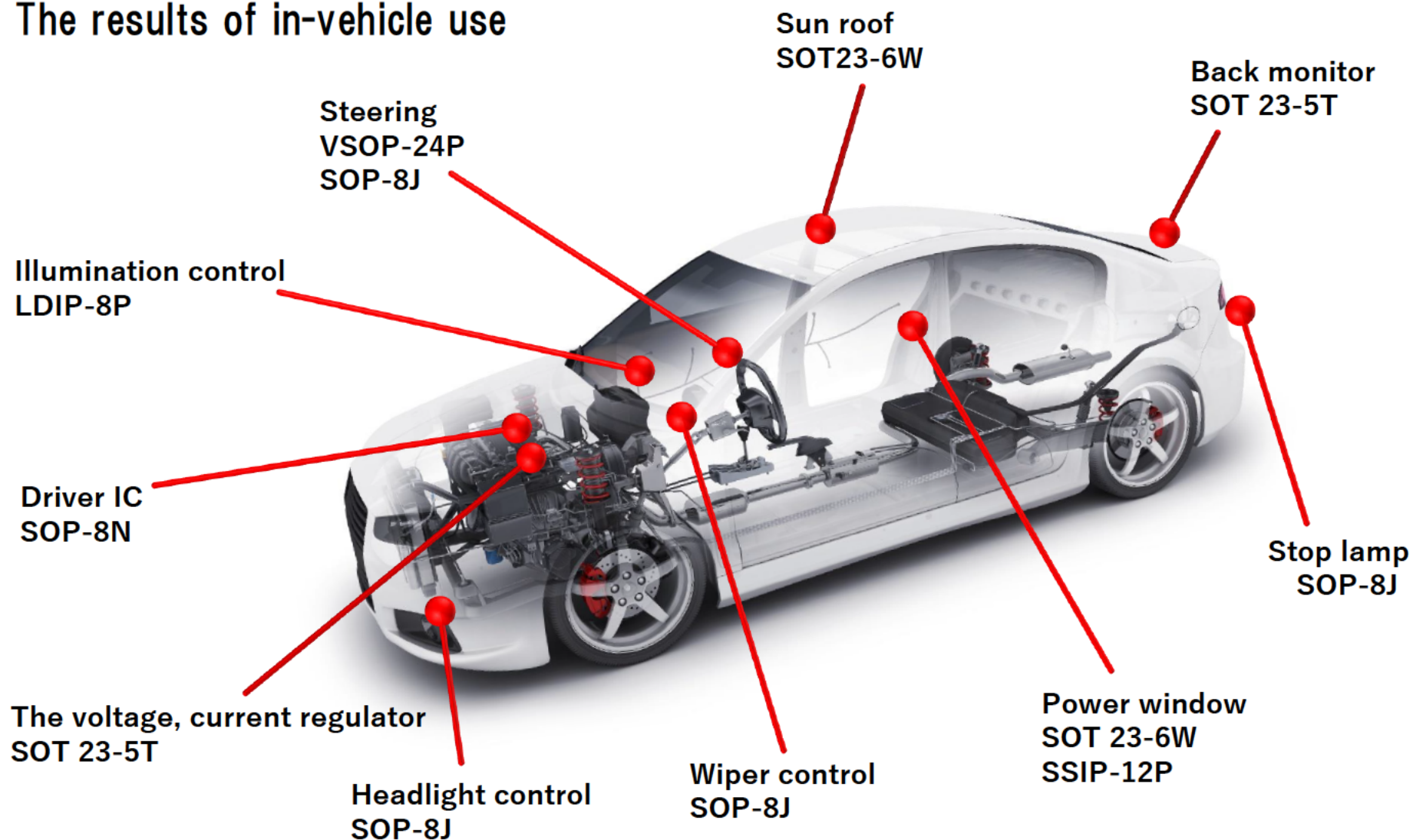


# Quality for Automotive Application

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## The results of in-vehicle use



# Quality for Automotive Application

## Differentiation with an in-vehicle article and the general article

Item	Way of thinking
Clarification and identification of in-vehicle use and requirements	Influence degree education and quality awareness improvement to a customer by the product identification
Produce with the facilities which limited vehicle installation	Use registered [in-vehicle article-limited device] in each process
Introduced setting and the tendency management by a special characteristic process	Introduce SPC tendency management and, by the WB process that is a special characteristic process and the process of the pyrometry, carry out management of $Cpk \geq 1.67$
Management of traceability	The management that traceability - is timely surely and can carry out 20 years storage of the deadline for main records storage
Inspect it at a change point	For a change point, carry out special department, DRBFM in the department concerned and carry out the correspondence for the risk

【In-vehicle article identification mark】

<Image>



【In-vehicle article handling authorization badge】



【In-vehicle article-limited device clear statement】



# Quality for Automotive Application

## Development and management of requirements

The demand of the customer is corrupted to control plan

Customer/CSR

3-1 特殊特性  
以下を甲指定の特殊特性 (SC) とします。  
① ワイヤボンディング  
② 高温選別 ※高温選別がある車載製品のみ

On specifications exchange

FMEA		潜在的故障モード (Potential Failure Mode)	潜在的故障の影響 (Potential Effect(s) of Failure)	厳しさ ランク Sev	分類 Class	潜在的故障の原因/メカニズム (Potential Cause(s)/ Mechanism(s) of Failure)	現行の設計管理 (Current Design)				リスク 優先 数 R.P.N.
							管理 予防 Controls Prevention	発生 頻度 Occur rence	管理 検出 Controls Detection	検出 Detec tion	
(Function)											
ワイヤ ボンディング	ワイヤの接合強度 規格を満足する 外觀規格を満足する	1st不着、強度不足 (Cuワイヤの界面腐食)			SC						
		2nd不着、強度不足			SC						

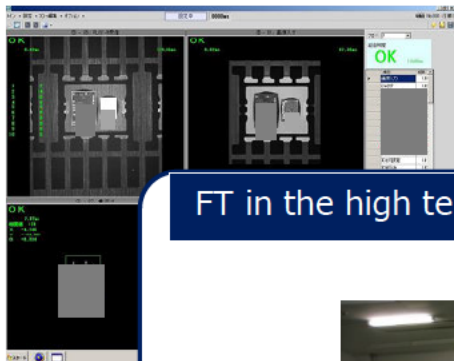
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Control plan		製造用の機械・装置 ・治具・工具	Characteristics 特性			(24) Special Char. Class. 特殊特性 の分類	Method 方法				(31) Reaction Plan 対応処置
			(21) No. 番号	(22) Product 製品	(23) Process 工程		(25) Product/Process Specification/ Tolerance 製品/工程の仕様 /公差	(26) Evaluation Measurement Tolerance 評価/測定の方 法	(27) Fool Proof ポカヨケ	Sample サンプル	
程の番号	明細							(28) Size サイズ	(29) Freq. 頻度		
5	ワイヤボンディング (※)銅ワイヤ	ワイヤボンダー キャピラリー	(1)			---					
			(2)			---					
			(3)			---					
			(4)			---					
			(5)			---					
			(6)			---					
			(7)	ワイヤプルテスト		SC					
			(8)	ホールシヤテスト		SC					
			(9)	ボンディングの 外觀		---					

# Quality for Automotive Application

Security of the quality in-vehicle using an inspection machine, a device

All quantity inspection after Diebond



All quantity inspection after WireBond



FT in the high temperature environment



X-Ray after Mold



Reflow device



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