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**Direct part mark (DPM) two dimensional bar code symbol
quality test**

(English Translation)

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References

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses redrafted law revision using ISO/IEC TR29158:2011 "automatic identification and data acquisition technology of information technology Direct marking of parts quality guidelines. " this standard compared with ISO/IEC TR29158:2011 more structural adjustment, the specific adjustments are as follows.

--- Some of the terms and definitions in Chapter 3 of ISO/IEC TR29158:2011 fall under Chapter 4, in alphabetical order;

--- Suspension of ISO/IEC TR29158:2011 6.2, Chapter 7, 7.3, 7.4 and Chapter 8, Chapter 10 suspended paragraph Deal with

--- Moved 6.1 of ISO/IEC TR 29158:2011 to Chapter 5 as 5.3; and 6.2 of ISO/IEC TR 29158:2011 Moved to Chapter 5 to 5.2; Moved 6.2 of ISO/IEC TR 29158:2011 to Chapter 5 as 5.3.3;

--- 6.4 6.4 "Reflectance Calibration" of ISO/IEC TR 29158:2011 to Chapter 6;

--- Move 6.5 of ISO/IEC TR 29158.:2011 to Chapter 7 as 7.2; 7.1 of ISO/IEC TR 29158:2011 Become 7.3, after the chapter number extension.

This standard and ISO/IEC TR29158:2011 technical differences and the reasons are as follows.

--- On normative references, this standard made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- Replacing ISO/IEC 15416 with GB/T 14258 modified to use international standards;
- Replacing ISO/IEC 15415 with revision GB/T 23704 using international standards;
- Replacing ISO/IEC 19762-1 and ISO/IEC 19762-2 with the newly revised ISO/IEC 19762;

- Added GB/T 12905.

--- ISO/IEC TR29158:2011 7.3.4 and 7.3.5 merged, rewritten, as 7.5.5, and in which an increase of "Otherwise, Determine the decoding fails, the symbol level is 0, the symbol detection is completed. "Designed to deal with the eventual completion of the loop without decoding.

--- Rewrite ISO/IEC TR29158:2011 7.4.6, to solve the problem of unclear logic such as loop overlap, and added "such as If the decoding fails, the decoding fails, the symbol level is 0, and the detection ends. "To deal with if the decoding fails.

This standard also made the following editorial changes.

--- Change the title of Chapter 5 of ISO/IEC TR 29158:2011 to "Testing equipment";

--- Added Appendix B (informative) "additional lighting schematic light path." this standard by the National Logistics Information Management Standardization Technical Committee (SAC/TC267) and focal point.

This standard was drafted unit. China Article Coding Center, Shanghai Institute of Quality and Standardization Institute of Standardization, Fujian Province, the national bar code Quality Supervision and Inspection Center, Shandong Institute of Standardization, China Association for Automatic Identification Technology, Beijing Jiaotong University, Beijing Network Imagination technology hair Exhibition Co., Ltd.

Introduction

Component Direct Marking (DPM) is an identification technology that typically includes, but is not limited to, the use of dots, laser etched, inkjet, and electrochemical Etch and other physical methods, marking the parts. This standard is the DPM generated two-dimensional bar code symbol test method standard.

When light is irradiated on the DPM symbol, the symbol mark formed by the dot and physical change will produce different reflections. For non-DPM two-dimensional bar Code, symbols are printed on a smooth surface, because of the different colors and the formation of different intensity of light. DPM two-dimensional bar code, reflecting the situation in contrast, the two reflection states of the mark itself or the background surface may be specular, that is, the reflection angle of light is equal to the incident angle, and this specular reflection Light is often much greater in intensity than diffuse light, resulting in the marker itself being lighter than a light-colored background. In addition, some marking and printing methods only can generate bitmap graphics, can not form a continuous smooth border.

Existing matrix code system specifications and two-dimensional bar code printing quality standards can not meet the above two methods of testing the symbol quality. this the standard aims to build a bridge between the existing two-dimensional bar code quality specifications and the DPM environment. In order to evaluate the DPM two-dimensional bar

code symbol quality and Predictive reading performance provides a standardized, image-based measurement method.

As with the code system norms and quality standards, the use of this standard, should be based on the specific application requirements to determine the applicable parameters.

Parts directly mark two-dimensional bar code Symbol quality inspection

1 Scope

This standard specifies the method of inspection and evaluation of the symbolic quality of two-dimensional bar code for direct marking of parts and components (DPM).

This standard applies to DPM two-dimensional bar code symbol quality inspection and DPM two-dimensional bar code detector manufacturing.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 12905 bar code terminology GB/T 14258 Information Technology Automatic Identification and Data Acquisition Technology Bar code symbol quality inspection (GB/T 14258-2003, ISO/IEC 15416:2000, MOD) GB/T 23704 Information technology, automatic identification and data acquisition technology two-dimensional bar code symbol quality inspection (GB/T 23704-2009, ISO/IEC 15415:2004, MOD) ISO/IEC 19762 Information Technology Automatic Identification and Data Acquisition Technology (AIDC) Coordination Vocabulary [Informationtechnology-Automaticidentificationanddatacapture (AIDC) techniques-Harmonizedvocabulary]

3 Terms and definitions

GB/T 12905, GB/T 14258, GB/T 23704 and ISO/IEC 19762 and the following terms and definitions apply to this file.

Reference symbol Printed high-contrast calibration card (such as TheGS1DataMatrixcalibratedconformancestandardtestcard).

Stick stick

A concatenation algorithm that should be connected to a region in connected symbols.