



**Specification RW-2500-13  
TE 108-121010**

**HTMS CABLE MARKERS  
HTMS-CM (HTTMS-CM)**

**Approved Signatories:**

**This document is electronically reviewed and approved by TE Connectivity.**

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TE CONNECTIVITY, SWINDON, UK

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## 1. REVISION HISTORY

Revision Number	Description of change	Date	Incorporated By
1	Live in DM.TEC	24/06/10	Auto
2	Refer to PCN	16/07/14 issued 08-2015	Lee Smith

## 2. SCOPE

This specification sheet, when used with RW-2500, defines the product characteristics and performance of TE Connectivity HTMS (HTTMS) Cable Marker.

The printing system developed for this marker sleeve is now obsolete. TE can only guarantee the physio-chemical nature of the product, and not any marking applied using non-recommended printing systems. Where non-standard systems are used, customers are required to carry out their own validation testing.

## 3. REQUIREMENTS

### 3.1. MATERIAL

The markers shall be fabricated from irradiated, thermally-stabilized, modified polyvinylidene fluoride compound. The material shall be homogeneous and essentially free from flaws, defects, bubbles, cracks, or inclusions.

### 3.2. COLOR

The sleeves shall be supplied in white, unless otherwise specified.

### 3.3. PROPERTIES

The sleeves shall meet the requirements of Table 2.

### 3.4. FORM

The markers shall be supplied as a continuous length of carrier strip which has been specifically punched to size, in accordance with Table 1.

#### **4. QUALITY ASSURANCE**

##### **4.1. Qualification Tests**

Qualification tests are those performed on markers and marker material submitted for qualification as a satisfactory product and shall consist of all tests listed in this specification.

##### **4.2. Acceptance Tests**

Acceptance tests are those performed on markers submitted for acceptance under contract. Acceptance tests shall consist of the following: Dimensions, Heat Shock (RW-2500).

##### **4.3. Test Specimens**

Test specimens shall be individual HTMS-CM, detached from the carrier strip. Where RW-2500 is referenced as a test method, the term "marker" or "specimen" shall be understood to mean "HTMS-CM".

**CONFIGURATION OF CARRIER**

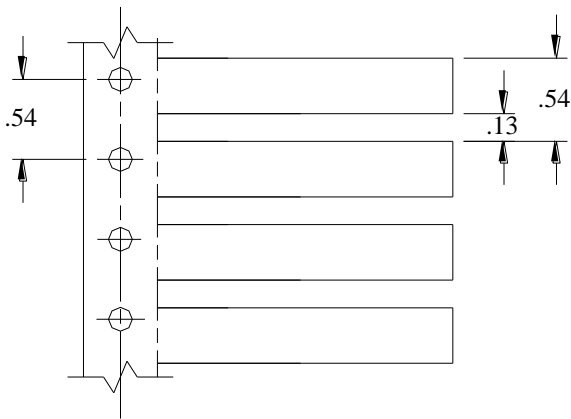


Figure 1  
1/4 inch size

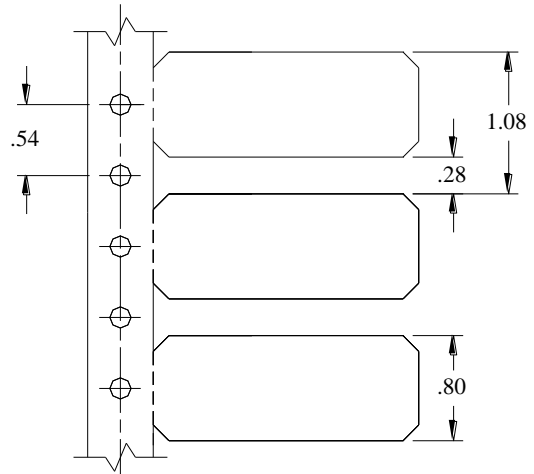


Figure 2  
1/2 inch size

Dimensions in inches (nominal)

**TABLE 1**  
**Cable Marker Dimensions**

PART DESCRIPTION	FIGURE NUMBER	THICKNESS IN INCHES	NUMBER OF HOLES
HTMS(HTTMS)-CM-1/4-4H	3	.020	4
HTMS(HTTMS)-CM-1/2-4H	4	.020	4
HTMS(HTTMS)-CM 1/2-6H	5	.020	6

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**SIZE AND HOLE CONFIGURATIONS**

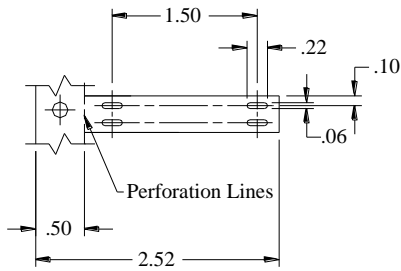


Figure 3  
HT-TMS-CM-1/4-4H

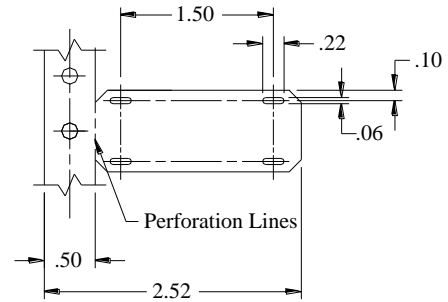


Figure 4  
HT-TMS-CM-1/2-4H

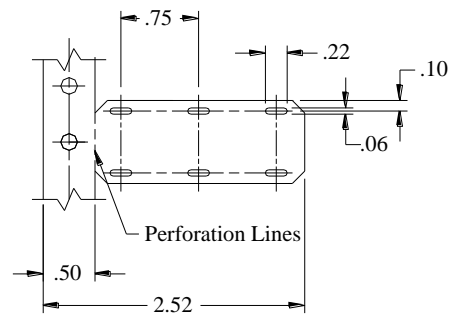


Figure 5  
HT-TMS-CM-1/2-6H

**Dimensions in inches (nominal)**

**TABLE 2**  
**Requirements**

PROPERTY	UNIT	REQUIREMENTS	RW-2500 TEST METHOD
<b>PHYSICAL</b>			
Dimensions	Inches	In accordance with Table 1	RW-2500 Section 4.3.1.2
Tensile Strength	MPa (psi)	(20.7) 3000 minimum	ASTM D 638
Ultimate Elongation	Percent	100 minimum	RW-2500 Section 4.3.2.2 1/8" wide die cut specimens 2 inches/min.
Specific Gravity	---	1.8 maximum	ASTM D 792
Low Temperature Flexibility 4 hours at -55°C (-65°F)	---	No cracking	Note 1 RW-2500 Section 4.3.5.2
Heat Shock 4 hours at 275°C (527°F)	---	No dripping, flowing or cracking	Note 2 RW-2500 Section 4.3.6.2
Heat Aging 168 hours at 225°C (437°F)	---	No cracking	Note 2 RW-2500 Section 4.3.7.2
Vacuum Outgassing			RW-2500 Section 4.3.18
• TML (Total Mass Loss)	Percent	1.0 maximum	
• VCM (Volatile Condensable Material)	Percent	0.1 maximum	ASTM E 595
<b>CHEMICAL</b>			
Corrosive Effect 16 hours at 200°C (392°F)	---	No corrosion	ASTM D 2671 Procedure A RW-2500 Section 4.3.13.2
Limiting Oxygen Index	Percent	40 minimum	ASTM D 2863
Fungus Resistance	---	Rating of 1 or less	ASTM G 21
Water Absorption 24 hours at 23°C (73°F)	Percent	0.5 maximum	ASTM D 570

Notes:

1. In accordance with RW-2500 Section 4.3.5.2 except that specimens shall be bent 90 degrees over a 1-inch mandrel.

2. Specimens shall be bent 90 degrees over a 5/16-inch mandrel.