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SPECIFICATION  
FOR  
HALF PITCH TWISTED FLAT CABLE  
KPCH-HP-N1-ST-30-\*\*\*-34P-RBW  
30AWG X 34P  
UL STYLE 2734 (80C, 30V)

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## 1. SCOPE

This specification covers the construction and characteristics of Half pitch Twisted flat cable "KPCH-HP-N1-ST-30-\*\*\*-34P-RBW" consisting of 30 AWG stranded conductors insulated with color coded FR-Polyolefin, twisted into pairs and formed a flat section with laminate tape laminated on both sides.

## 2. EXPLANATION OF CABLE TYPE

ex. KPCH-HP-N1-ST-30-\*\*\*-34P-RBW

(1) (2) (3) (4) (5) (6)

- (1) Cable Abbreviation  
 (2) Kind of conductor :ST=Stranded Conductor  
 (3) Conductor Size :30=30AWG  
 (4) Length of Span :130mm,135mm,160-500mm(Standard 250mm)  
 (5) Number of Pairs :34 pairs  
 (6)Insulation Color Symbol :RBW= Red, Blue, White

## 3. CONSTRUCTION

## 3.1 Conductor

- 3.1.1 Material : Tinned annealed copper wire  
 3.1.2 Size : 30 AWG  
 3.1.3 Stranding : 7 stranded of 38AWG  
 3.1.4 Diameter : Nom. 0.306mm

## 3.2 Insulation

- 3.2.1 Material : Flame Retardant Polyolefin  
 3.2.2 Thickness : Nom. 0.16 mm  
 3.2.3 Diameter : Nom. 0.635 mm  
 3.2.4 Color Code : Red, Blue, White (See Fig.2)

## 3.3 Twisted Pairs

Two insulated conductors shall be twisted to form a pair.  
 Twisted direction in adjacent pairs shall be reversed to reduce cable crosstalk even further.

## 3.4 Assembling

The twisted pairs shall be laid parallel in one plane and retained flat section at specific interval , then laminate tape fully laminated on both sides .  
 The cable alternate twisted pair section with flat section. The length of twisted pair section and flat section shall be in accordance with Table 2 and Fig. 1.  
 The cable shall meet the other dimensional requirements of Table 2 and Fig 1.

## 4. Electrical Characteristics

The characteristics of the completed cable shall be as shown in the attached table 1.

Table 1 Electrical Characteristics(at 20degrees)

Item		Unit	Specification Value
Maximum conductor resistance		Ohms/ km	365
Dielectric strength		V / min	AC 350 or DC 500
Minimum insulation resistance		M ohms km	10
Characteristic impedance (at TDR)	Single-ended	Ohms	Nom. 88
	Differential		Nom. 126
Propagation delay		ns/m	Max. 5.4
Attenuation(at 5MHz)		dB/m	Max. 0.095

## 5. UL Flammability Rating: VW-1

## 6. PACKING

Each spool shall be marked with the following information.

Cable shall be spooled and packed in such a manner as to be adequately protected from damage during packing, shipping, and normal handling.

Spools shall be packed on a carton. (The spool may contain joints. In that case, the detail of length is indicated.)

- (1) Type of Cable
- (2) UL Style and USE
- (3) Size and Number of Pairs
- (4) Length
- (5) Manufacturer's name or trade mark
- (6) Year of manufacture

## 7. UL STYLE and USE

UL STYLE: 2734 (80C, 30V)

UL USE: "Internal Wiring of Electronic Equipment in Class 2 Circuits Only."

Table 2 Dimension

Laminate Tape	Material	PET film with adhesive layer
	PET film Thickness (mm)	0.009
Length of Twisted pair Section	(mm)	80, 85, 110-450(Standard 200)
Length of Flat Section	(mm)	50
Length of Span	(mm)	130, 135, 160-500(Standard 250)
Flat Section Dimension	Pitch "P" (mm)	0.635 +/- 0.05
	Width "A" (mm)	42.55 +/- 0.25
	Width "B" (mm)	43.18 +/- 0.25
	Thickness "T" (mm)	Approx. 0.7

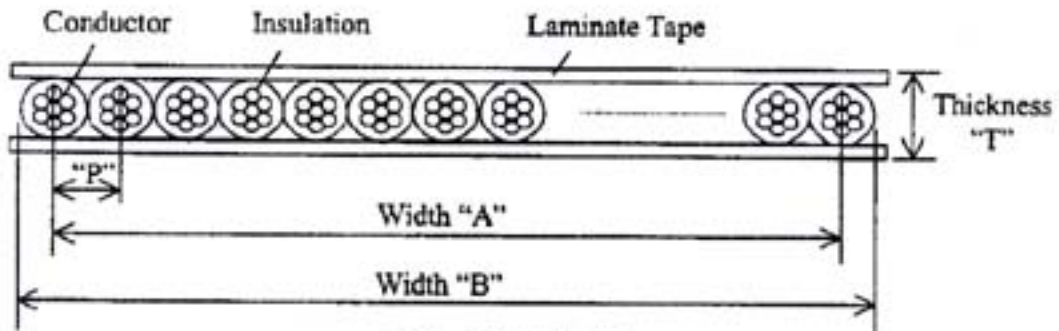
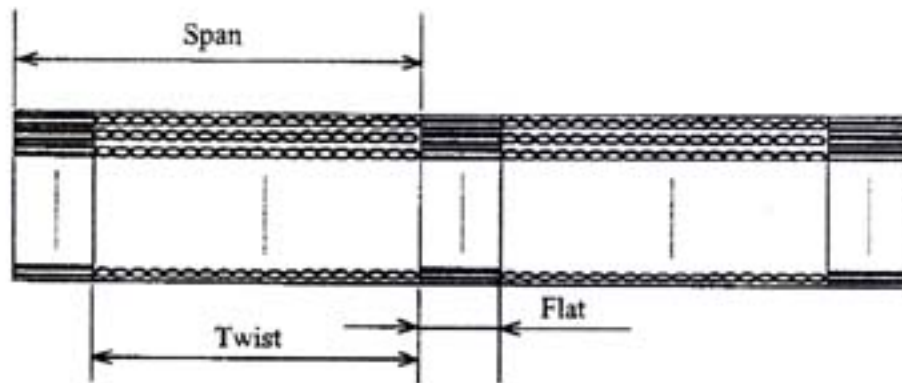


Fig.1 Construction

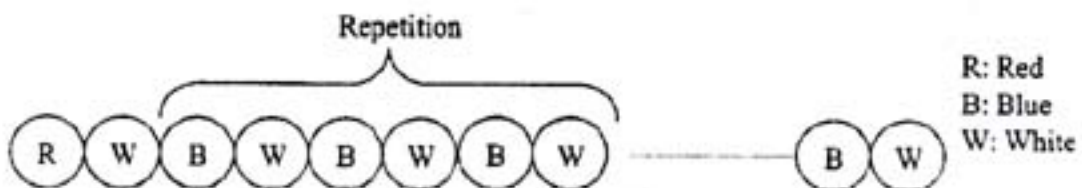


Fig. 2 Insulation color