

IM5-PK2525 Specification
UHF RFID Ultra Small Package Tag

REV 1.2 September, 2012

Hitachi Chemical Co.,Ltd.

Marketing Dept. RFID Project

Advanced Performance Materials Marketing & Sales Operations

1. Scope

This specsheet defines UHF RFID Ultra Small Package Tag IM5-PK2525.

2. Model No.

Model No. is shown in Table 1.

Table 1.Type

No.	Model	Note
1	IM5-PK2525	

3. RFID Protocol

The tag is compliant with RFID standards shown in Table 2.

Table 2. Compliant Standards

No.	Item	Spec
1	Protocol	ISO/IEC 18000-6 TypeC EPCglobal™ Class1 Generation2

4. Operating Conditions

Operating conditions are shown in Table 3.

Table 3. Operating Environment

No.	Item	Spec	Note
1	Operating Temp.	-40 to 85°C	Humidity : 10 to 80%RH
2	Storage Temp.	-40 to 85°C	Humidity : 10 to 80%RH

5. General specs

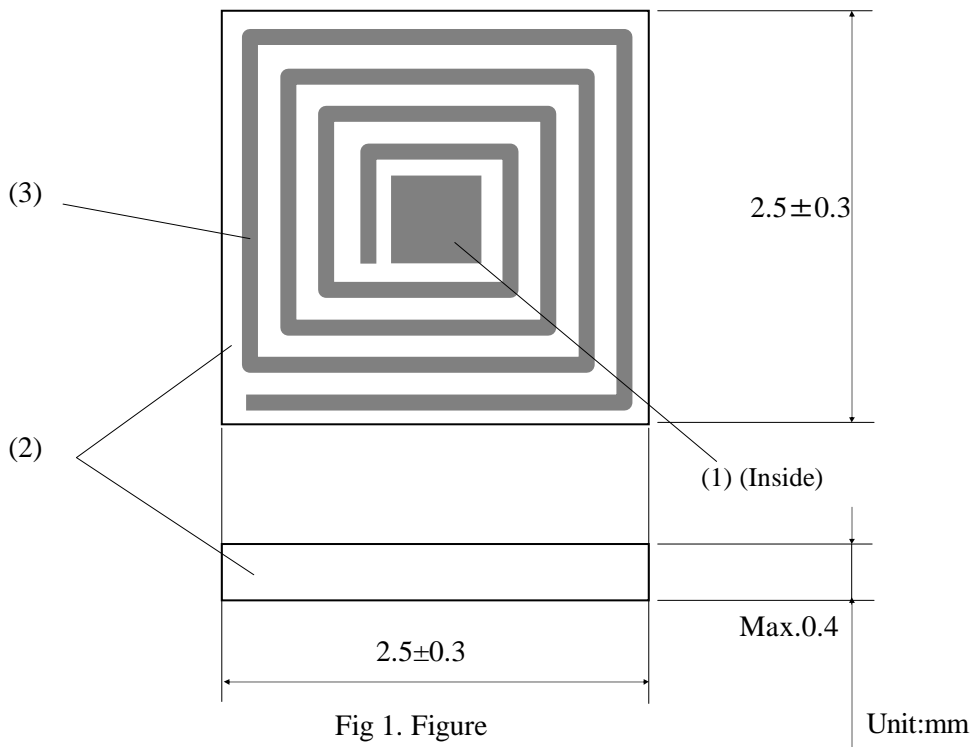
General specs are shown in Table 4.

Table 4. General Specs

No.	Item	Spec		Note
1	Carrier Frequency	860 to 960MHz		
2	Memory	TID	96bit	48bit : Serial No 16bit : TID Header 32bit : Manufacturer/Model No
		EPC	128bit	
		Passwords	64bit	Kill/Access
3	Data Retention	50 years		Reference
4	Write Endurance	100,000 cycles		Reference

6. Figure

The tag figure is shown in Fig 1.



7. Material

Material of tag is shown in Table 5.

Table 5. Material

No.	Parts	Spec	Note
(1)	IC Chip	Monza5 by Impinj	
(2)	Packaging Material	Epoxy Resin (Halogen Free)	
(3)	Antenna Pattern Surface	Au	

8. Read Range

Read range is shown in Table 6.

Table 6. Read range

No.	Item	Specs	Condition	
1	Read Range	10 mm typ.	Reader	HHT
			Frequency	920MHz, 953MHz
			Power	1W
			Environment	Antenna surface of tag is facing reader antenna surface. (Free Air/Room Temp. and Humidity)

Note : Read range can change by the reader model, power, environment.

9. Packing Specification

(1) Packing Specification

Packing Specification is shown in Table 7.

Table 7. Packing Specification

No.	Item	Specs	Note
1	Delivery Form	Tape and Reel	
2	Quantity	5,000 pieces	
3	Tape Width	8.0±0.3mm	
4	Tag Pitch	4.0±0.1mm	Carrier Tape Pocket
5	Outside Diameter of Reel	180+0/-1.5mm	
6	Inside Diameter of Reel	φ13±0.2mm	

(2) Tape

Tape spec is shown in Fig 2.

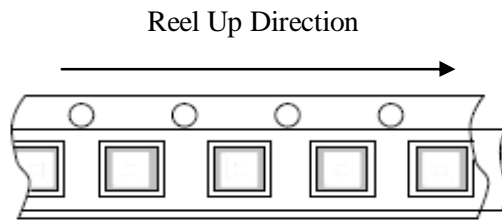


Fig 2. Reel Up Direction

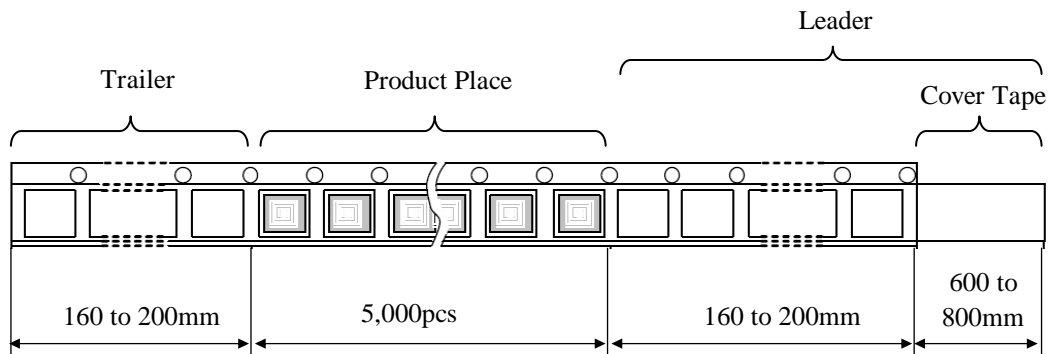


Fig 3. Product Storage

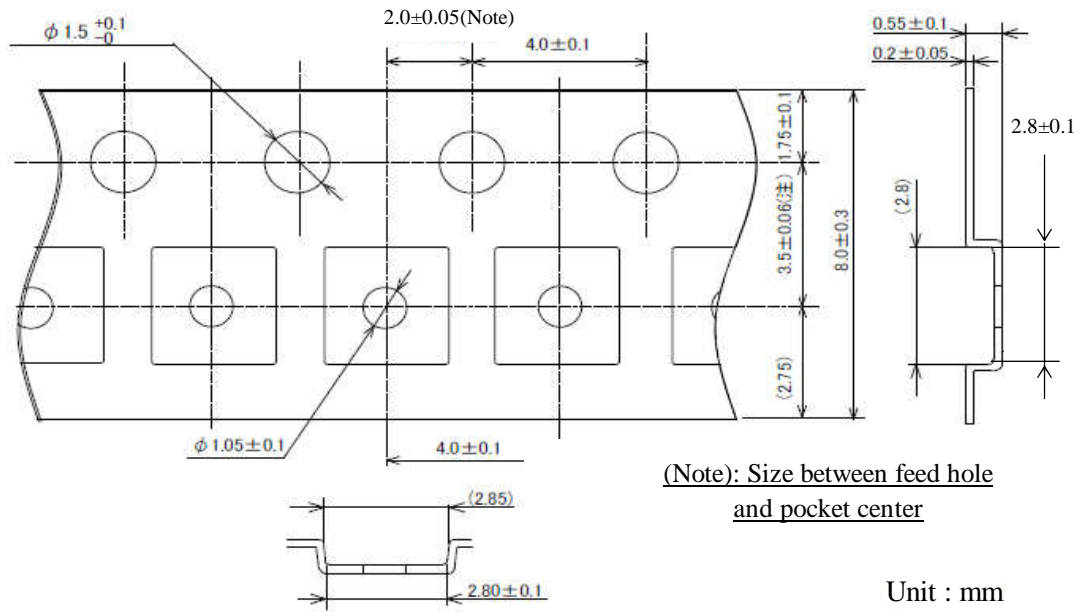


Fig 4. Carrier Tape Size

(3) Reel

Reel Spec is shown in Fig 5.

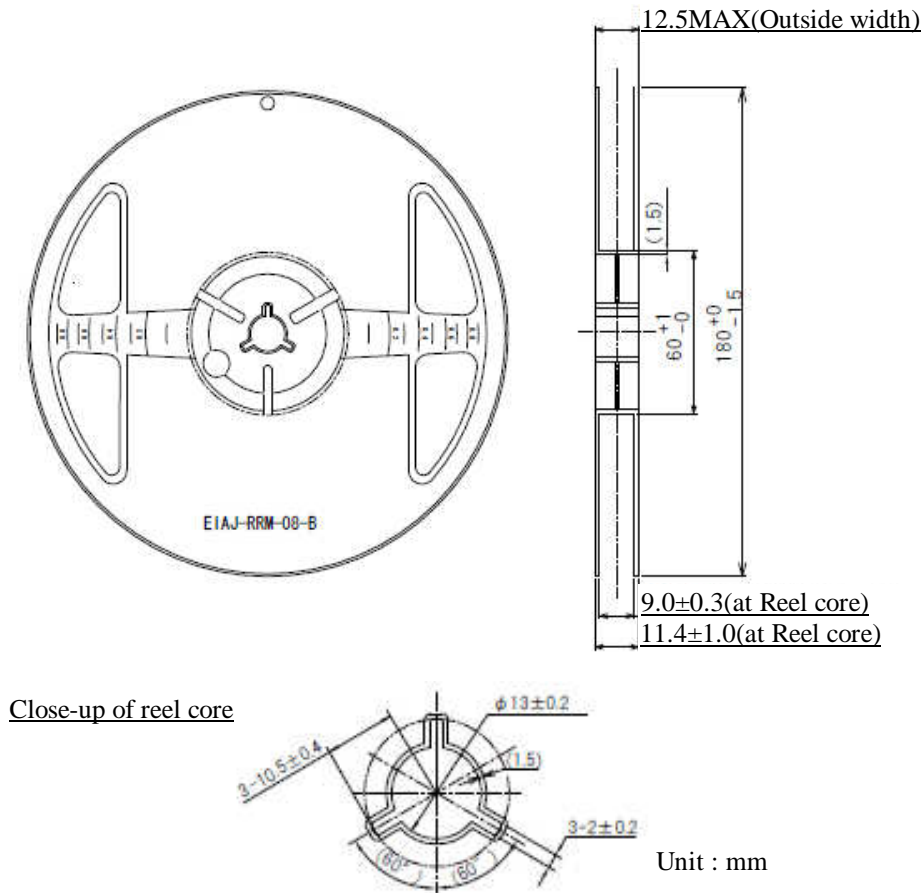
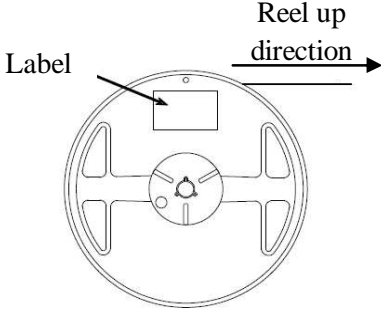
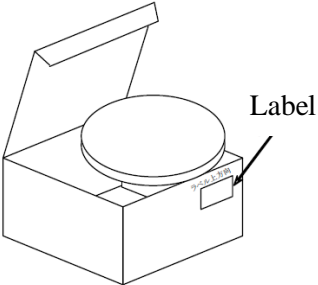
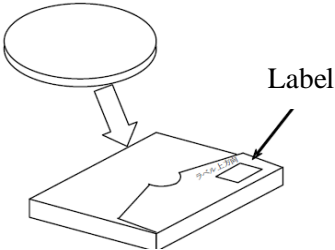


Fig 5. Reel Spec

(4) Inner Box, Label Contents

Inner Box, Label Contents are shown in Table 8.

Table 8. Inner Box, Label Contents

	Delivery Form	Label Example	Quantity						
Tape Reel		<table border="1"> <tr> <td>Model</td> <td>IM5-PK2525</td> </tr> <tr> <td>Quantity</td> <td>5,000</td> </tr> <tr> <td>Lot No.</td> <td></td> </tr> </table>	Model	IM5-PK2525	Quantity	5,000	Lot No.		5,000 pieces
Model	IM5-PK2525								
Quantity	5,000								
Lot No.									
5 Reels		<table border="1"> <tr> <td>Model</td> <td>IM5-PK2525</td> </tr> <tr> <td>Quantity</td> <td></td> </tr> <tr> <td>Manufacturer</td> <td>Hitachi Chemical Co.,Ltd.</td> </tr> </table>	Model	IM5-PK2525	Quantity		Manufacturer	Hitachi Chemical Co.,Ltd.	Max.25,000 pieces (Max.5 Reels)
Model	IM5-PK2525								
Quantity									
Manufacturer	Hitachi Chemical Co.,Ltd.								
1 Reel		<table border="1"> <tr> <td>Model</td> <td>IM5-PK2525</td> </tr> <tr> <td>Quantity</td> <td>5,000</td> </tr> <tr> <td>Manufacturer</td> <td>Hitachi Chemical Co.,Ltd.</td> </tr> </table>	Model	IM5-PK2525	Quantity	5,000	Manufacturer	Hitachi Chemical Co.,Ltd.	5,000 pieces (1 Reel)
Model	IM5-PK2525								
Quantity	5,000								
Manufacturer	Hitachi Chemical Co.,Ltd.								

Note

1. Read range will be change depend on environment.
2. When you write data in the tag, please keep certain distance and modify wrote data.
3. When you use heating process to apply the tag, please do not heat the tag long time.
Please reconfirm with us when you use heating process.

For safety designing

1. Although Hitachi Chemical endeavors to improve the quality and reliability of its products, IC Tag products have specific characteristics such as the occurrence of failure at a certain rate and malfunctions under certain use conditions. Please be sure to implement safety measures to guard against the possibility of physical injury, and injury or damage caused by fire in the event of the failure of a Hitachi Chemical product, such as safety design for hardware and software including but not limited to redundancy, fire control and malfunction prevention.

- Illustration in this specsheet will be different from actual products.
- This specification will be changed without notices.

