



Innovative Interconnections™

ISO/TS 16949 : 2002

CERTIFICATE AFAQ CERTIFICATE

SPECIFICATION NO.	ASK2008-D016
DATE	2008-11-11
REV.	A

## PRODUCT SPECIFICATION

**CUSTOMER :**

Customer P/N	Supplier	
	Part Name	Part No.
	SMT Micro RFI Clip	ATC-BB-02-001

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**1. 적용 범위 (Scope)**

본 사양서는 AutosplICE의 SMT Micro RFI Clip에 한하여 적용한다.

( This specification covers the AutosplICE SMT Micro RFI Clips. )

**2. 제품 설명 (Product Description)**

**2.1 개요 (Product Summary)**

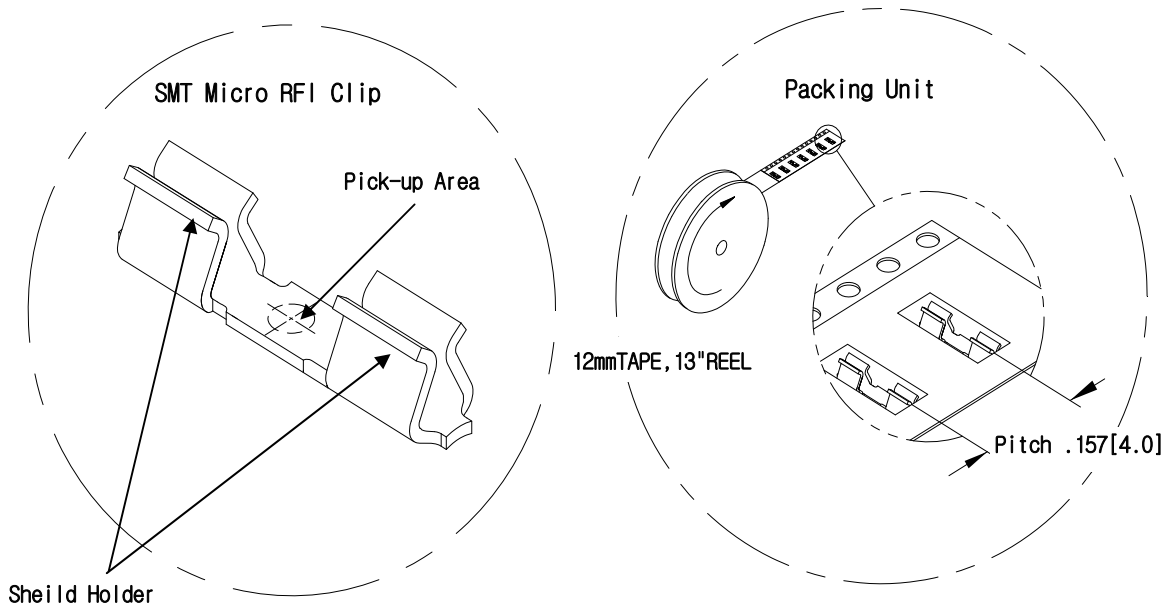
표면 실장 부품인 AutosplICE의 Micro RFI Clip은 EMI/RFI Shield 조립에 있어서 자동화를 제시하며, 개별 리셉터클로 구성된 Micro RFI Clip은 수땀방식과는 전혀 다른 비용효과를 가질 수 있다.

Micro RFI Clip은 EIA Tape와 Reel 포장되어 표준 및 고속 장비 모두 적용 가능 하다.

또한 PCB의 어떤부분도 실장 가능 하고, 홀을 증가시킬 필요가 없으며, PCB사용 면적을 줄일 수 있다.

( The AutosplICE Micro RFI Clips are surface mount devices that offer an automated solution to EMI/RFI shield assembly. As a discrete receptacle component, the Micro RFI Clips are a cost-effective alternative to hand soldering. The Micro RFI Clips are packaged in EIA tape and reel and are compatible with standard high-speed placement equipment. The clip can be placed anywhere on the PCB, eliminating the need for excess holes and saving PCB real estate.)

**2.2 구성 (Product Component)**



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SMT MICRO  
RFI CLIP

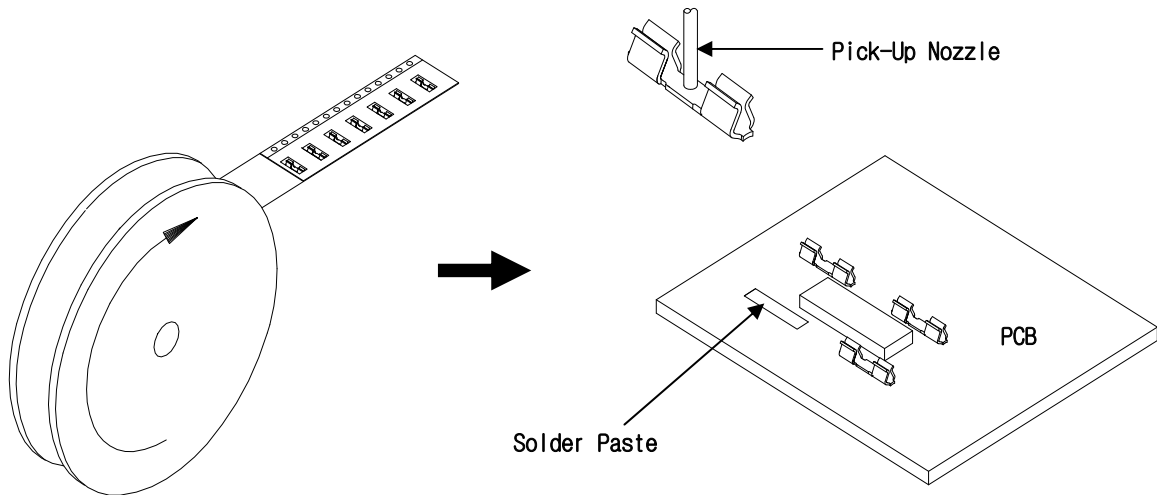
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## 2.3 공정 (Process)

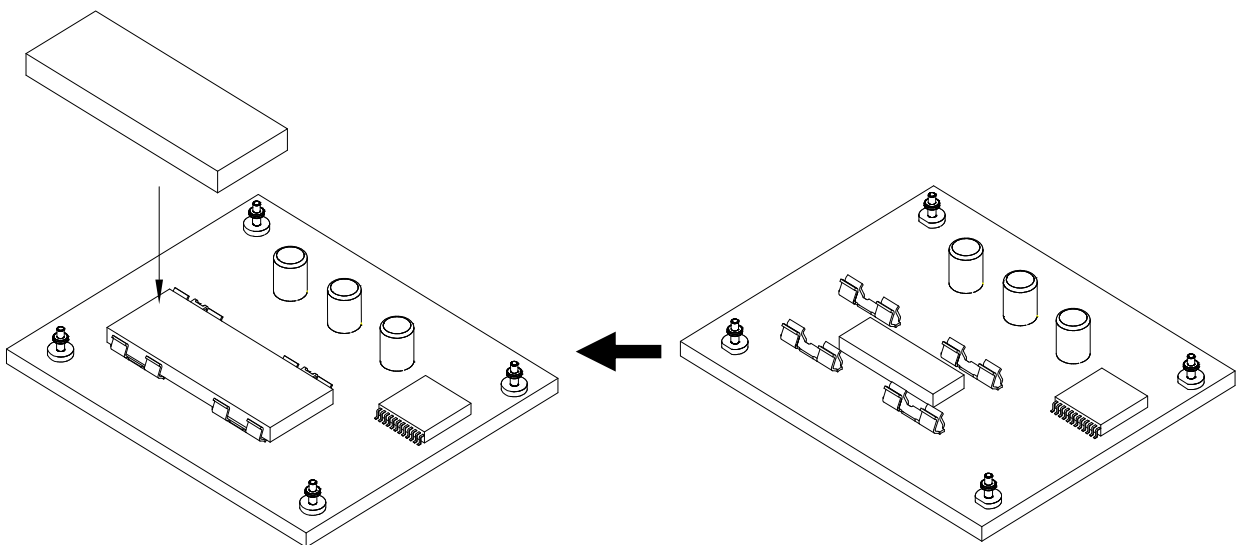
1.SMT Micro RFI Clip Feed

2.Pick-Up & Mount



4.Shield Ass'y

3.Reflow



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**3. 기계적 사양 (Mechanical Specifications)**

**3.1 원재료 (Materials)**

3.1.1 SMT Micro RFI Clip : SUS 301

3.1.2 SMT Tape : PS or PET

3.1.3 Cover Tape : PSA

**3.2 도금 (Platings) :**

SMT Micro RFI Clips are plated with matte Sn over Ni

**4. 성능 (Performance)**

**4.1 일반적 특성 (General)**

항목 (Item)	조 건 (Test Condition)	규 격 (Requirement)
외관 및 치수 Visual and Dimension		제품도에 따른다 Refer to Drawing

**4-2 기계적 성능 (Mechanical Performance)**

항목 (Item)	조 건 (Test Condition)	규 격 (Requirement)
삽입력, 발거력 Insertion/Withdrawal Force	수직방향 25±3mm/min 속도로 측정. 삽입 과 발거를 15회 반복	Insertion Forces : 45.4g (0.11b) Min
	Insert and withdraw shields at the speed rate of 25±3mm/minute. 15Cycles.	Withdrawal Forces : 45.4g (0.11b) Min

**4-3 환경적 성능 (Environmental Performance and Others)**

항목 (Item)	조 건 (Test Condition)	규 격 (Requirement)	
내 열 성 Heat Resistance	시험온도 : 105±2℃ 시험시간 : 96 시간 후처리 온도 : 실온±1℃ 후처리 시간 : 1시간	외관	변형없을것
	Heat Temperature : 105±2℃ Duration : 96hours Post Treatment Temperature : Room Temperature±1℃ Post Treatment Duration : 1hour	Appearance	No Damage

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항목 (Item)	조 건 (Test Condition)	규 격 (Requirement)	
내 습 성 Humidity	시험 온도 : $60 \pm 2^{\circ}\text{C}$ 상대 습도 : 90~95% 시험시간 : 96 시간 후처리 온도 : 실온 $\pm 1^{\circ}\text{C}$ 후처리 시간 : 10이상 2시간 이내	외관	변형없을것
	Temperature : $60 \pm 2^{\circ}\text{C}$ Relative Humidity : 90~95% Duration : 96hours Post Treatment Relative Temperature : Room Temperature $\pm 1^{\circ}\text{C}$ Post Treatment Duration : 1~2 hours	Appearance	No Damage
온도 변화 시험 Temperature Cycling	시험 저온 온도 : $-55 \pm 2^{\circ}\text{C}$ 시험 고온 온도 : $105 \pm 2^{\circ}\text{C}$ 저고온 이행시간 : 3분 이내 시험 사이클 : $-55^{\circ}\text{C}$ 30분 → 가열 3분 → $105^{\circ}\text{C}$ 30분/1사이클, 5회 반복 후처리 온도 : 실온 $\pm 1^{\circ}\text{C}$ 후처리 시간 : 10이상 2시간 이내	외관	변형없을것
	Low Temperature : $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ High Temperature : $105^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Cooling or Heating Time: 3minutes Max. Cycle : $-55^{\circ}\text{C}$ , 30min → Heating, 3 min → $105^{\circ}\text{C}$ , 30min / 1Cycle, 5Cycles Post Treatment Relative Temperature : Room Temperature $\pm 1^{\circ}\text{C}$ Post Treatment Duration : 1~2 hours	Appearance	No Damage
진동 시험 Vibration	진동수 : 10-55-10Hz/분 진폭 : 1.5mm P-P 진동 시간 : 3축 방향 (X,Y,Z) 각 2시간	외관	변형없을것
	Sweep time: 10-55-10Hz in minute Amplitude : 1.5mm P-P Duration : 6hours (2hours each X,Y,Z axis)	Appearance	No Damage

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항목 (Item)	조 건 (Test Condition)	규 격 (Requirement)	
충격시험 Shock	가속도 : 490m/s <sup>2</sup> (50G) 작용시간 : 6ms 충격회수 : X,Y,Z 방향 각 3회	외관	변형없을것
	Acceleration : 490m/s <sup>2</sup> (50G) Duration : 6ms Cycle : 3 strokes in each X,Y,Z axes	Appearance	No Damage
낙하시험 Drop	높이 : 50cm , 100cm, 150cm 작용 방향: Z 방향 충격횟수 : 각 3회	외관	관찰
	Height : 50cm , 100cm, 150cm Direction : Z axis Times : 3 times	Appearance	Observation

**5. 치수 (Product Dimensions)**

도면 참조 (Refer to the drawing.)



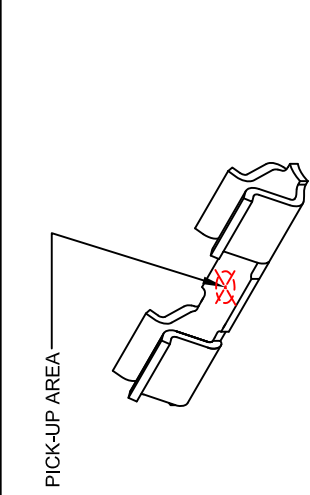
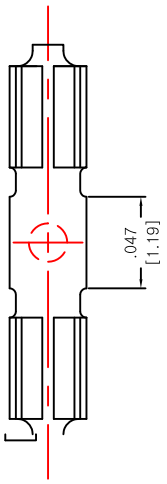
<p>1</p> <p>2</p> <p>3</p> <p>4</p>	<p>2</p> <p>3</p> <p>4</p>	<p>3</p> <p>4</p>	<p>4</p>
<p>A</p>	<p>B</p>	<p>C</p>	<p>D</p>
<p>B</p>	<p>C</p>	<p>D</p>	<p>E</p>
<p>C</p>	<p>D</p>	<p>E</p>	<p>F</p>
<p>D</p>	<p>E</p>	<p>F</p>	<p>F</p>
<p>E</p>	<p>F</p>	<p>F</p>	<p>F</p>

**CUSTOMER DRAWING**

- NOTES: UNLESS OTHERWISE SPECIFIED**
1. ALL DIMENSIONS APPLY AFTER PLATING.
  2. DIMENSION IN FREE STATE.
  3. RECOMMENDED SHIELD THICKNESS =  $.006[0.15] + .003[0.08]$
  4. REFER TO THE TABLE "A" FOR STENCIL HOLE SIZE.
- BUT, PAD SIZE MUST BE FIXED ALWAYS AS H=5.20 & V=1.0

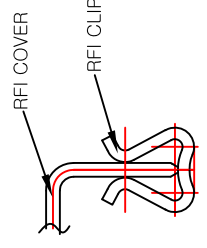
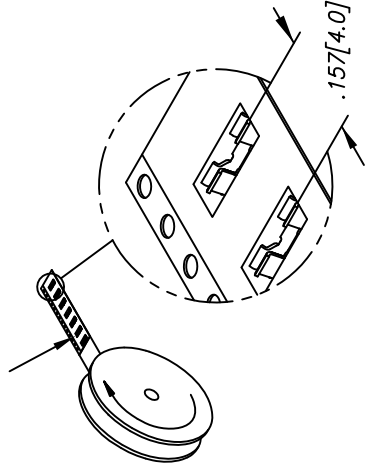
TABLE "A"	
STENCIL THICKNESS	H (H) V (V)
0.15	4.60 0.8
0.12	5.00 0.9
0.10	5.20 1.0

UNIT : mm

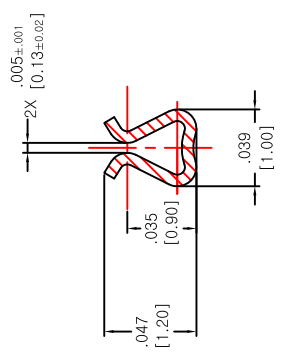


ISOMETRIC VIEW

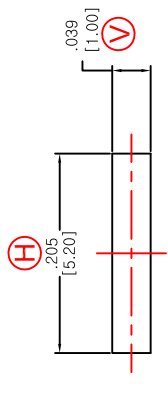
12mm TAPE PER E.I.A. STD. 481 , 13" REEL ,  
SEE TABLE FOR QTY OF PARTS PER REEL.



COVER INSTALLED



SECTION A-A  
SCALE 1:1



RECOMMENDED PAD SIZE

UNLESS OTHERWISE SPECIFIED,  
ALL DIMENSIONS ARE IN MM.  
TOLERANCES ARE:  
0 ≤ X < 3 : ±0.10  
3 ≤ X < 10 : ±0.15  
10 ≤ X < 25 : ±0.20  
25 ≤ X : ±0.25

MATERIAL	SUS301	HEAT TREAT	
FINISH	POST-TIN (MATTE)	Unit Qty	10,000PCS / REEL

This drawing and the information set forth herein are the property of AutosplICE, Inc. and are to be held in trust and confidence. Publication, disclosure, or use for any purpose not expressly authorized in writing by AutosplICE, Inc. is prohibited.

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PROJECT	YJ.PARK	DATE	2008.09.26
DESIGNED BY	YJ.PARK	DATE	2008.09.26
APPROVED BY	BRIAN.LEE	DATE	2008.09.26
TITLE	SMT MICRO RFI CLIP (BOTTOM TYPE)		
SIE	A4	DRAWING NUMBER	C-ATC-BB-02-001
SCALE	1:1	WEIGHT	
		SHEET 1 OF 1	