

1. Part Name and Part Number

This product line has been named as “SQUIB CONNECTOR AK-II TYPE” consisting of the part number as shown in Fig. 1 and 2.

1.1 Housing and Ferrite:

* Part Number	Part Name
X-2005510-X	SQUIB AK-II 2P PLUG HOUSING
X-2005511-5	COVER FOR SQUIB AK-II 2P PLUG ASS'Y
2005512-1	CPA (Locking Button) FOR SQUIB AK-II 2P PLUG ASS'Y
2005937-1	FERRITE FOR SQUIB AK-II 2P PLUG ASS'Y

Fig. 1

* Note: Part number is consisted from listed base number and 1 digit numeric prefix and suffix with dash.
 Refer to catalog or customer drawing for specific part numbers for each base number.
 When prefix zero, zero and dash are omitted.

1.2 Contact:

Contact Features	Contact P/N	L/P P/N	Wire Sizes (mm ²)	Remarks
Socket Contact	2005939-3	2005939-1 / 2005939-2	0.5	

Fig. 2

1.3 Product Composition:

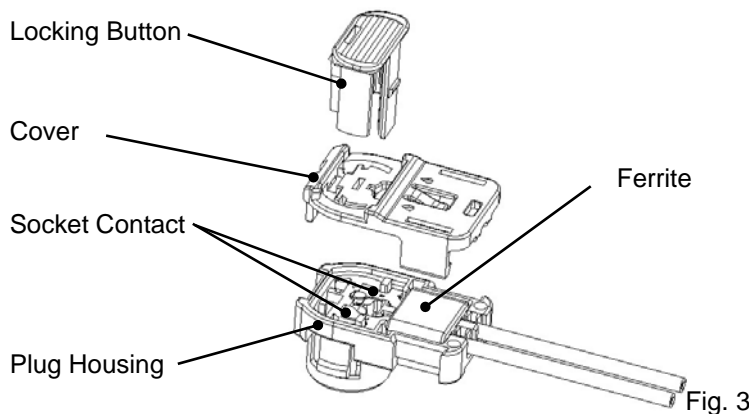


Fig. 3

2. Inspection of Contact, Housing and Ferrite:

2.1 Pre-shipment Inspection by Tyco Electronics

All the pre-shipment inspections by Tyco Electronics are carried out for each shipment lot based on the quality control rules and applicable standards by means of the statistical control method.

2.2 Customer's Receiving Inspection:

Although, the products are thoroughly inspected before delivery, it is recommended that the customer be attentive to confirm the status of products, to check out if the products incurred any damage during transit.

<Contacts>

Item	Check Points	Measuring Apparatus
Visual Inspection	(1) Configuration and Appearance	Visual
	(2) Plating Finish	Visual
	(3) Reeling Status of Strip Terminals	Visual
Dimensional Inspection	(1) Width and Height of Wire Barrel	Calipers

Upon Receiving, the reeled terminal products should be classified by manufacturing date and inspect visual and dimension to check the first five terminals in reel. (Reference TE-spec. 129-1012)

Acceptable of the products is verified by proving the products meeting the specified requirements.

<Housing>

Item	Check Point	Measuring Apparatus
Appearance Inspection	(1) Burrs, Discoloration & Deformation	Visual
	(2) Cracks, Breakage & Chipping off	Visual
Functional Inspection	(1) Mating Check to see if the connector mate and unmate smoothly with Gas Generator	Tactual

The product housings submitted to inspection are classified by manufacturing date and inspect visual and function to the randomly selected five pieced out of the lot.

(Reference TE-spec. 129-1012)

Acceptable of the product is verified by proving the products meeting the specified requirements.

<Ferrite>

Item	Check Points	Measuring Apparatus
Appearance Inspection	(1) Burrs, Discoloration & Deformation	Visual
	(2) Cracks, Breakage & Chipping off	Visual

The product ferrites submitted to inspection are classified by manufacturing date and inspect visual to the randomly selected five pieced out of the lot. (Reference TE-spec. 129-1012)

Acceptable of the product is verified by proving the products meeting the specified requirements.

3. Control of Crimped Products:

Crimping of contacts must be done by using Tyco Electronics specified application tooling in accordance with the procedure specified in applicable instruction sheet.

Acceptable of the products is verified by proving the products meeting the specified requirements.

3.1 Storage and Transfer of Reeled Products

- (1) Avoid leaving or carrying the contact reel in an open area without wrapping it in proper material.
- (2) Do not lift up and carry the contact reel by gripping one the side of reel, this may result in damage to the reel and contacts before use. (See Fig. 4)

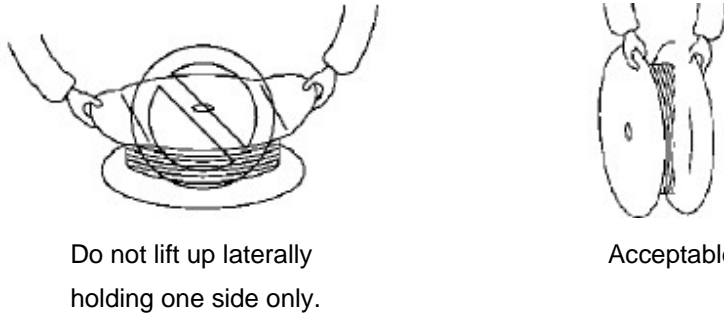


Fig. 4

- (3) Avoid storing the contact reel in a moist or dusty place. Stock the reel in a comparatively dry and clean place (5~35 °C, 45~85%RH) away from direct sunlight.
- (4) When removing the contact reel from the machine, fasten the end of contact strip onto the edge of the reel with use of proper string or wire. (See Fig. 5)

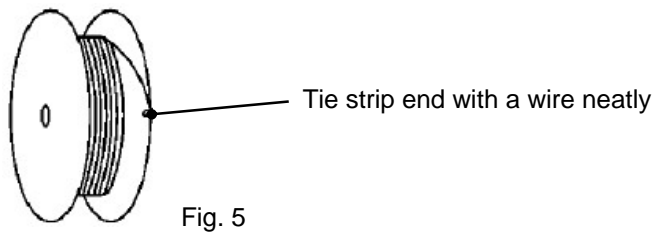


Fig. 5

3.2 Reference Documents for Crimping Operation

The documents listed below should be referred to for the specific details of crimping and assembly operation.

114-61022: Application Specification for Socket Contact for 1mm DIA Pin.

- (1) Wire end must be stripped without nick, cutoff, or damage of wire strands.

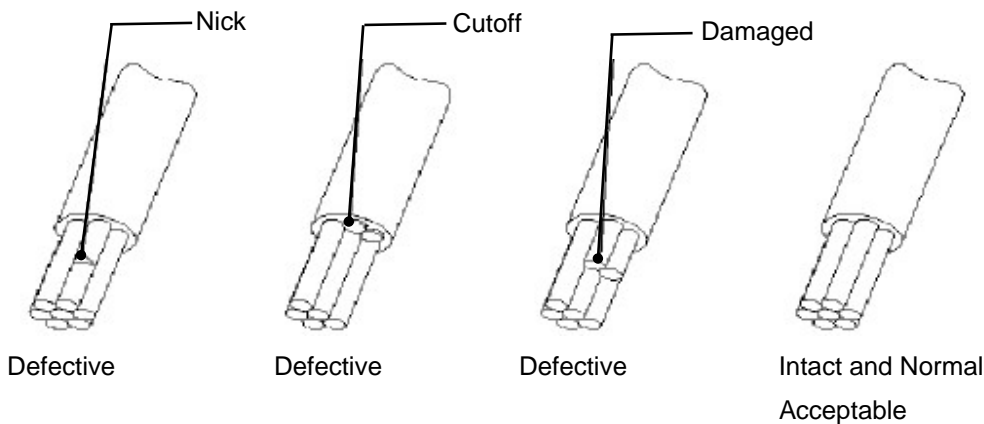


Fig. 6

- (2) Wire end Pre-treatment before Crimping:

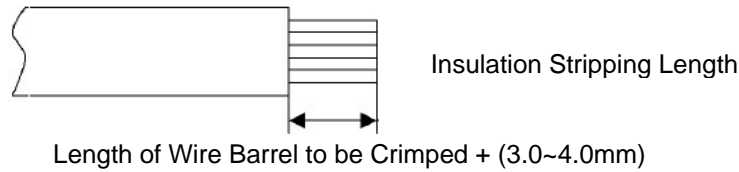


Fig. 7

- (3) Cross-section View of Wire Barrel Crimp:

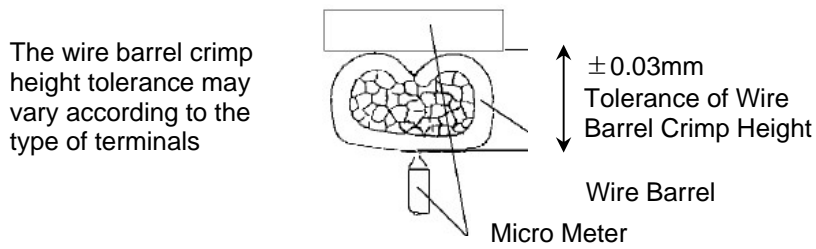


Fig. 8

- (4) Modified micrometer for measurement of crimp height (See Fig. 8)

3.2.1 Crimped Condition of Contact:

(For detailed features, refer to Application Specification, 114-61022: Socket Contact for 1mmDIA Pin)

NOTE The socket contacts require additional bending after stamping.
Left and Right socket contacts are reeled successively.

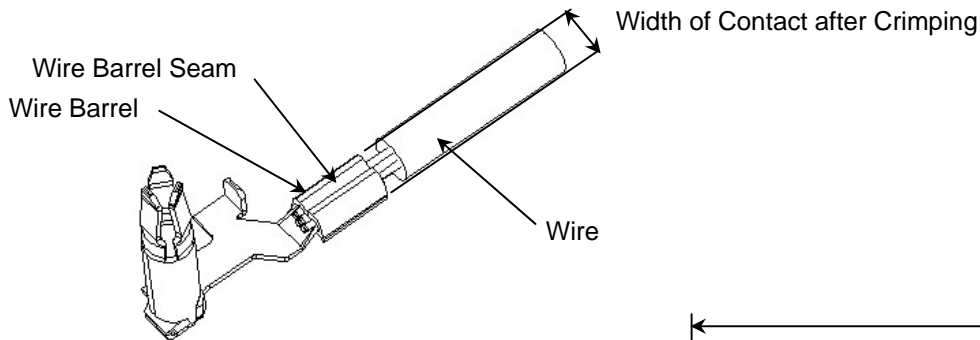


Fig. 9

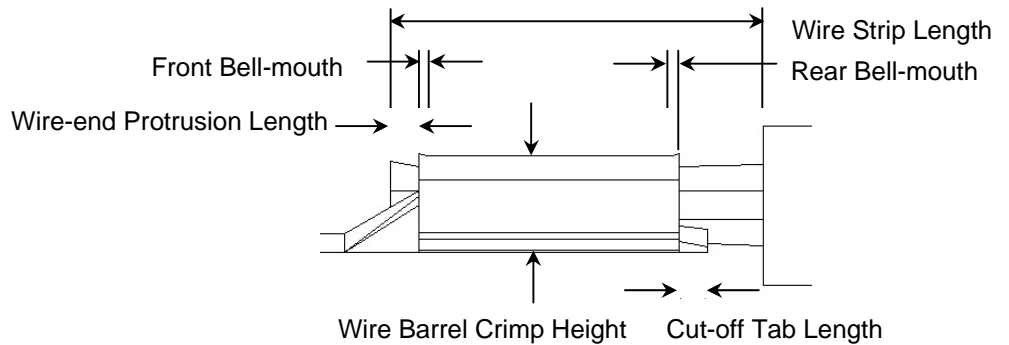


Fig. 10

3.2.2 Crimp Data:

The following shows the detailed data of contact crimping by applicator. Confirm contents before the operation.

Contact P/N	Applicator Number	Wire Size (mm ²)	Wire Barrel Crimp		Crimp Tensile Strength (N) (min.)
			Width (mm)	Crimp Height (mm)	
2005939-3	T.B.D	0.5	1.4 "F"	0.91	100

3.2.3 Applicable Wires: Applicable Wires to be Automotive Low Voltage Wires.

Nominal Size	Number of Strands / Diameter of Strand (mm)	Calculated Cross Section Area (mm ²)	Overall Outside Diameter	
			Standard	Maximum
AVSS 0.5	7 / 0.32	0.5630	1.6	1.7
AVSSXF 0.5	19 / 0.19	0.5387	1.6	1.7

Note: Overall outside diameter is permissible 1.8mm Max.

3.3 Control of Crimped In-process Products:

3.3.1 Inspection of Products

Inspection of crimped. In-process products must be performed by the lot unit consisting of the product group manufactured during the one continuous operation under the same set-up adjustment of the crimping machine in the identical manufacturing conditions, or the groups of the produced products during one work day operation.

The inspection should be performed according to the criteria shown in the listing below.

Inspection Types	Timing	Inspection Items
Inspection on Products made under initial set-up condition of applicator	At the time of completion of initial set-up of applicator to crimp the contact	Visual inspection and Dimensional Inspection on all items listed in Fig.
Lot Inspection	Before to start a routine operation each work day	Same as above
	During continuous operation	Visual inspection on all the items listed in Fig. 17, and Dimension Inspection on item No. 3 only Fig.

Inspection Types	Checking Points and methods	Measuring Apparatus
Visual Inspection	1. Loose-out of the wire conductors out side the wire barrel crimp, and cut-off of conductor	Visual
	2. Defective crimped form of contact (forming up of bell mouth, and wire end protrusion length)	Visual
	3. Defective wire barrel bottom area forming (burr appearing, inclusive)	Visual
	4. Mis-gripping of insulation barrel crimp on wire insulation	Visual
	5. Deformation of contacting area of contact	Visual
Dimensional Inspection	1. Dimensions of Cut-off Tab Length: 0.5mm Max.	Calipers
	2. Deformation of contact (bend-up, lateral bend and twisting)	Magnifying Glass
	3. Crimp Height	Micrometer
	4. Front and rear bell mouth forming Front bell mouth: 0.5mm Max. Rear bell mouth: 0.5mm Max.	Calipers

NOTE

Calipers are defined as vernier calipers or equivalent measuring tools, having the identical precision measurement level.

3.3.2 Storage and handling

- (a) Store the products in the clean, dry area, and should be covered with proper sheet or paper when placed in an open air, should be forbidden always for prevention of contamination by dust and particles
- (b) Do not bend with all directional contact except bending process.**
- (c) Do not bundles and wrap up contact after crimp.**
- (d) Avoid stacking and piling up the in-process products heaping up in large volume, lest it should result in catching together or entangled on the projecting parts of the leads, causing damage and breakage of the products. Deformation of the contact will result in malfunction of contacting parts electrically.
- (e) When to separate parts apart, care must be taken not to jerk and pull forcefully with cross section area. (Fig. 11)
- (f) Do not hit product after crimp.
- (g) Do not drop product after crimp.

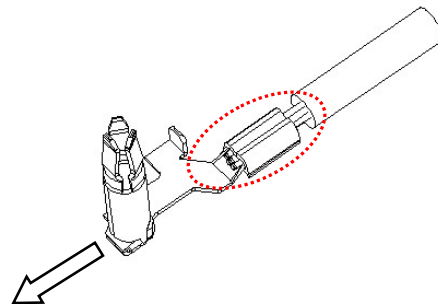


Fig. 11

4. Manufacturing Harness Assembles:

- 4.1 Loading wire into Ferrite: (manual process only)
After crimping, thread ferrite on a wire and crimp contacts.

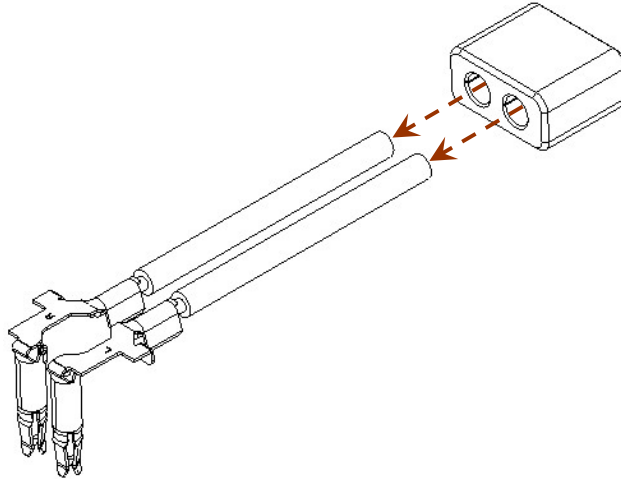


Fig. 12

4.2 Loading Contacts into Main Housing

- ① On the crimped wire, put the ferrite on the fixed position (near the crimping point).
- ② Insert the contact into the designated hole of the housing.
Please push not only the ferrite part but also the section area of contact on Fig. 13 at the same time.

NOTE

The transformation of the contact or housing occurs when the contact comes off from a designated hole or only the ferrite part has been pushed.

- ③ Please confirm the contact does not come off by pulling the wire lightly.

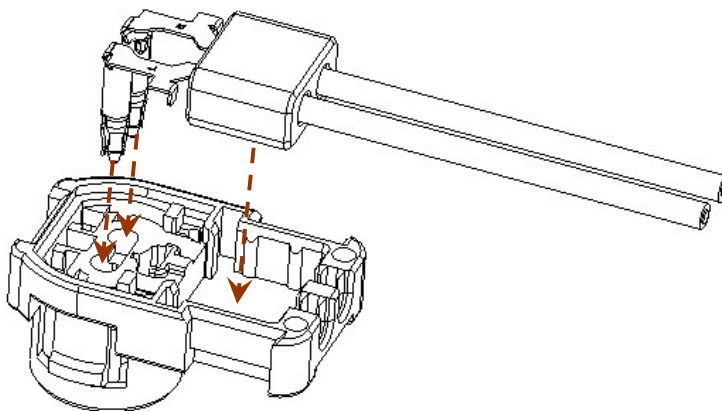


Fig. 13

NOTE

Please check the insertion position of Left and Right contacts.

- 4.3 Loading cover housing into plug housing
 (1) Press cover housing on aperture of plug housing

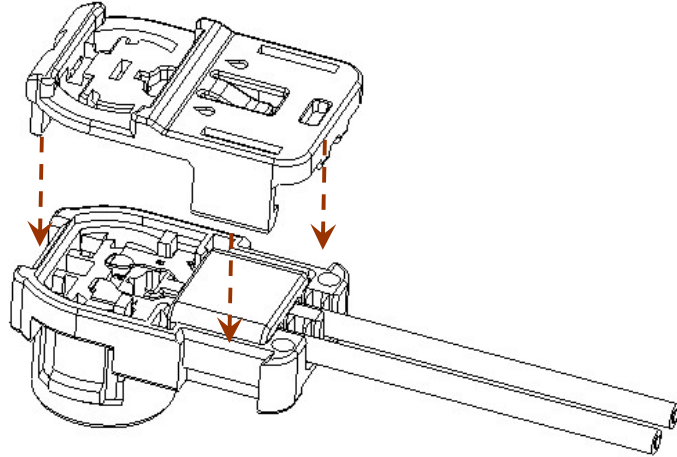


Fig. 14

- (2) It is finish when cover housing is locked.

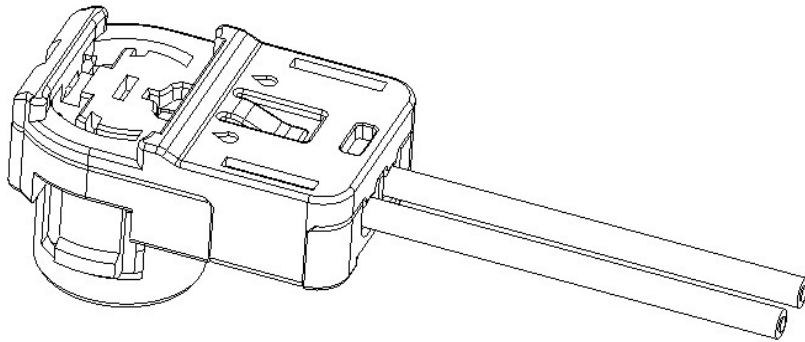


Fig. 15

NOTE

If you will control final assemble to use of dimension, to make sure as below.

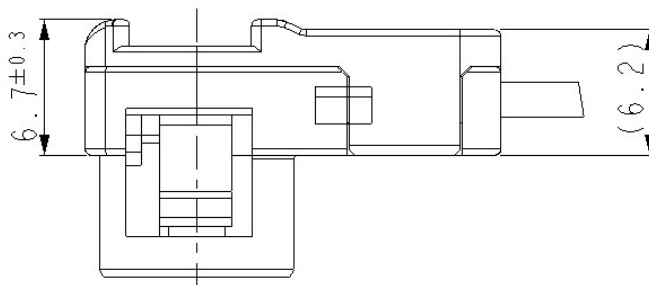


Fig. 16

4.4 Assemble locking button into a connector housing

- (1) Insert stick of Locking Button into a connector housing hole.

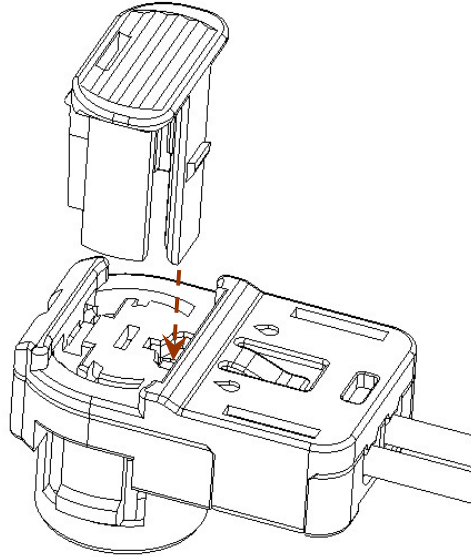


Fig. 17

- (2) Push the locking button to pre-assembly position. (Pushing force: 30N Max.) Push the center of locking button straight.

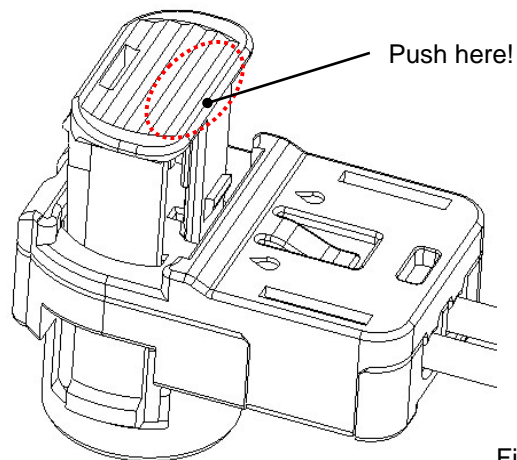


Fig. 18

(3) Check if the locking button is placed on the position like Fig. 19

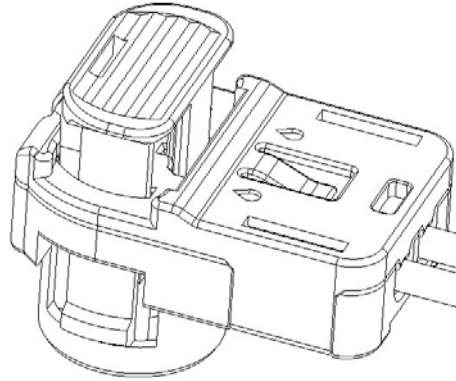


Fig. 19

NOTE

Does not push the button over pre-assemble position by force.

If you do, housing and locking button will break.

If you will control final assemble to use of dimension, to make sure as below. See Fig.20

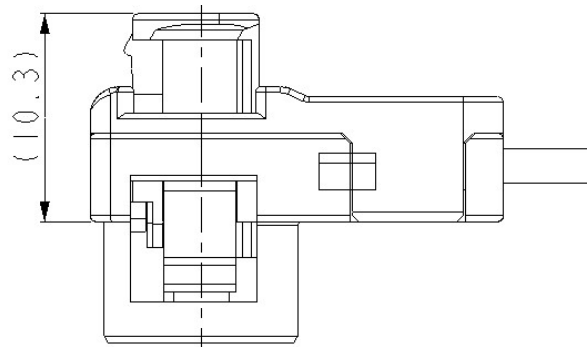


Fig. 20

5. How to Extract Female Contact

: It does not recommend that extract female contact.

단자를 빼는 것을 추천하지 않는다.

During removal operation of contact, care must be taken not to cause deformation of contact, housing, ferrite. If you find deformations, do not attempt to reuse them.

단자를 빼내는 동안 단자, 하우징, 페라이트의 변형이 발행하지 않도록 주의해야만 한다.

만약 변형이 생긴다면, 그것들을 재사용해서는 안 된다.

6. Reference Documents

- 408-61002: Instruction sheet
- 114-61022: Application Specification
- 108-61103: Product Specification

7. Revision History

B	REVISED	12.FEB.'10
A	RELEASED	25.NOV.'08
REV.	REVISION RECORD	DATE

8. Specification Approval

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Senior Product Engineer

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Product Engineering Manager