

COAXIAL CABLE CONNECTOR INTERFACE – SQUARE OUTER CONDUCTOR

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1. SCOPE

This radio frequency (RF) connector interface specification is suited for unsealed automobile applications up to 2 GHz. Dimensional requirements are specified in this document to ensure interchangeability. This RF connector interface specification is intended for in-line, board mount, device mount, straight or angled applications. Performance requirements are specified in SAE/USCAR-2, and in SAE/USCAR-17.

2. REFERENCES

SAE/USCAR-2 Performance Specification for Automotive Electrical Connector Systems
SAE/USCAR-17 Performance Specification for Automotive RF Connector Systems

The performance specs can be obtained from the following location:

SAE
400 Commonwealth Dr
Warrendale, PA 15096-0001
USA
<http://www.sae.org>

RAL RAL color charts are available from:
RAL
Sieburger Strasse 39
D-53757 Sankt Augustin
Telefon 0 22 41 - 16 05-0
Telefax 0 22 41 - 16 05-16
<http://www.muster-schmidt.de>

3. DIMENSIONS OF THE INTERFACE (RECEPTACLE, SINGLE CONDUCTOR)

3.1 Receptacle Basic Dimensions

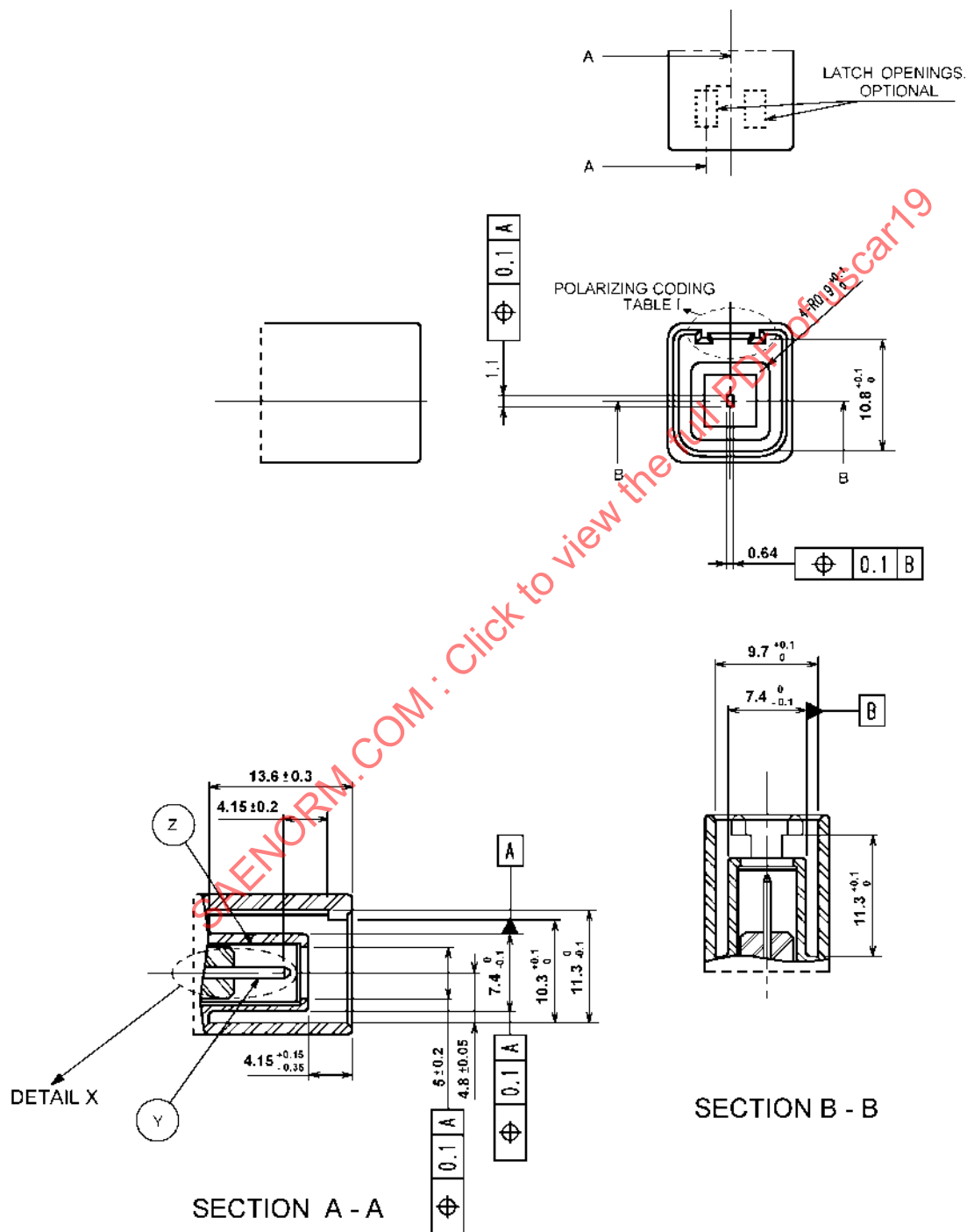


FIGURE 3.1: Receptacle Basic Dimensions

3.2 Contact Dimensioning and Material/Plating Requirements

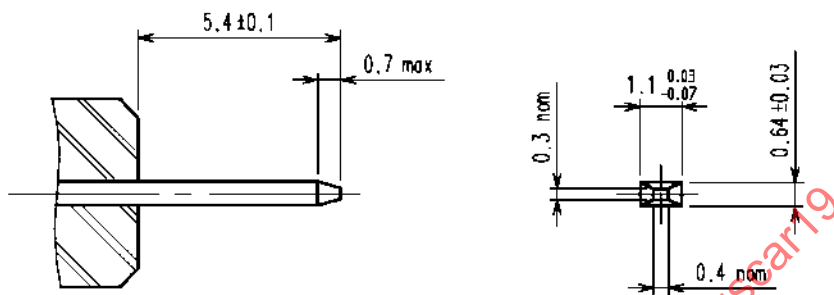


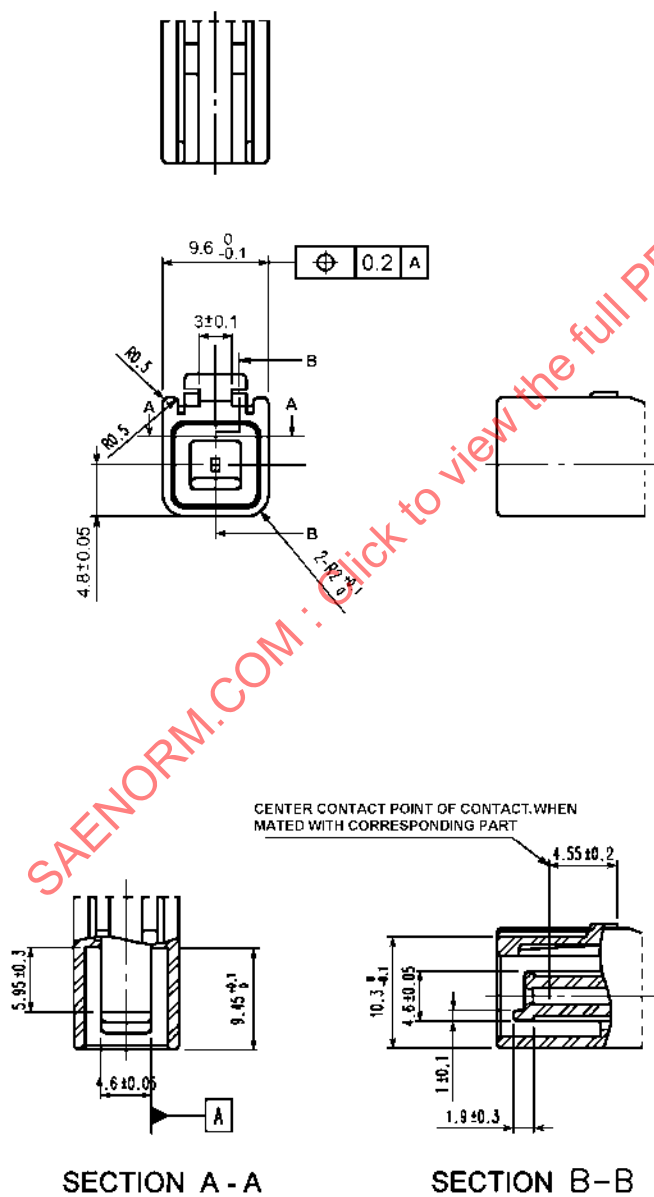
FIGURE 3.2: Male Terminal Dimensioning Requirements

Identification	Description	BASE MATERIAL AND PLATING OF CONDUCTORS
Y	Contact - center	Cu alloy with electrical conductivity $\geq 15\%$ IACS Plating : $\geq 1\mu\text{m}$ SnPb over $0.5\mu\text{m}$ Ni
Z	Contact - outer	Cu alloy with electrical conductivity $\geq 15\%$ IACS Plating : $\geq 1\mu\text{m}$ SnPb over $0.5\mu\text{m}$ Ni

TABLE 3.2: Contact Material and Plating

4. REFERENCE DIMENSIONS OF THE PLUG

USCAR/EWCAP does not specify dimensions of the plug. The dimensions shown in figure 4.1 are for reference only.



5. MULTI-CONDUCTOR DIMENSIONS

Reference Sections 3 and 4 for additional pertinent dimensions.

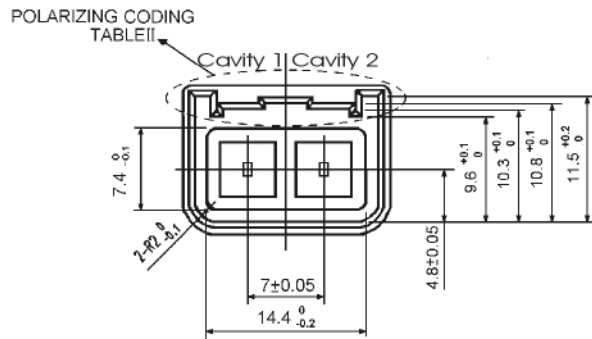


FIGURE 5.1: 2 Contact – Receptacle Basic Dimensions

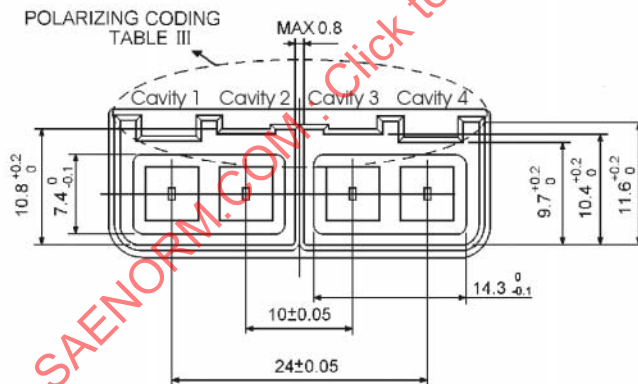


FIGURE 5.2: 4 Contact – Receptacle Basic Dimensions

6. CODING

6.1 Single Contact

RECEPTACLE SINGLE CONTACT

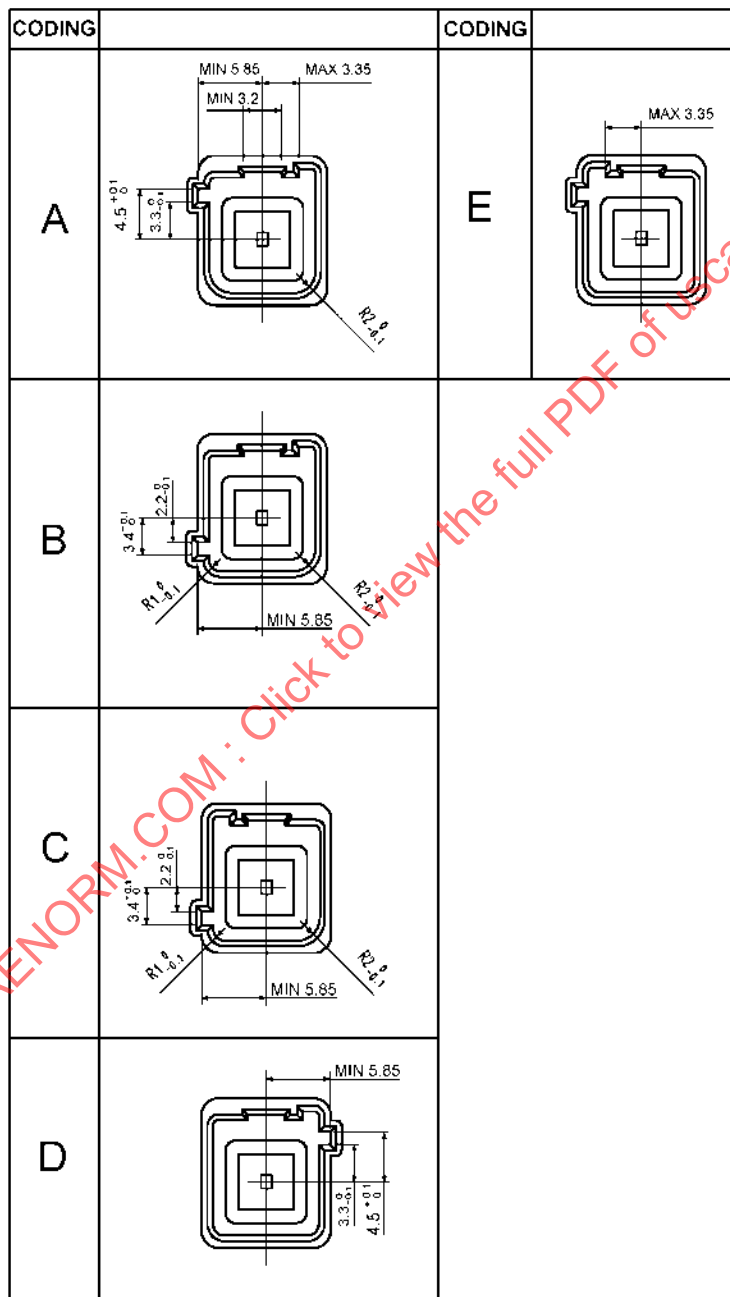


FIGURE 6.1: Single Contact Dimensioning Requirements

Coding	Color	RAL#	Applications
A	Nut Brown	8011	TV ¹
B	Leaf Green	6002	TV ²
C	Signal Blue	5005	GPS
D	Claret Violet	4004	Cellular Phone
E	Heather Violet	4003	GPS Navigation only

TABLE 6.1: Single Contact – Polarization, Color, and Usage

1 – VHF where defined by receiver

2 – UHF where defined by receiver

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6.2 Two Contacts

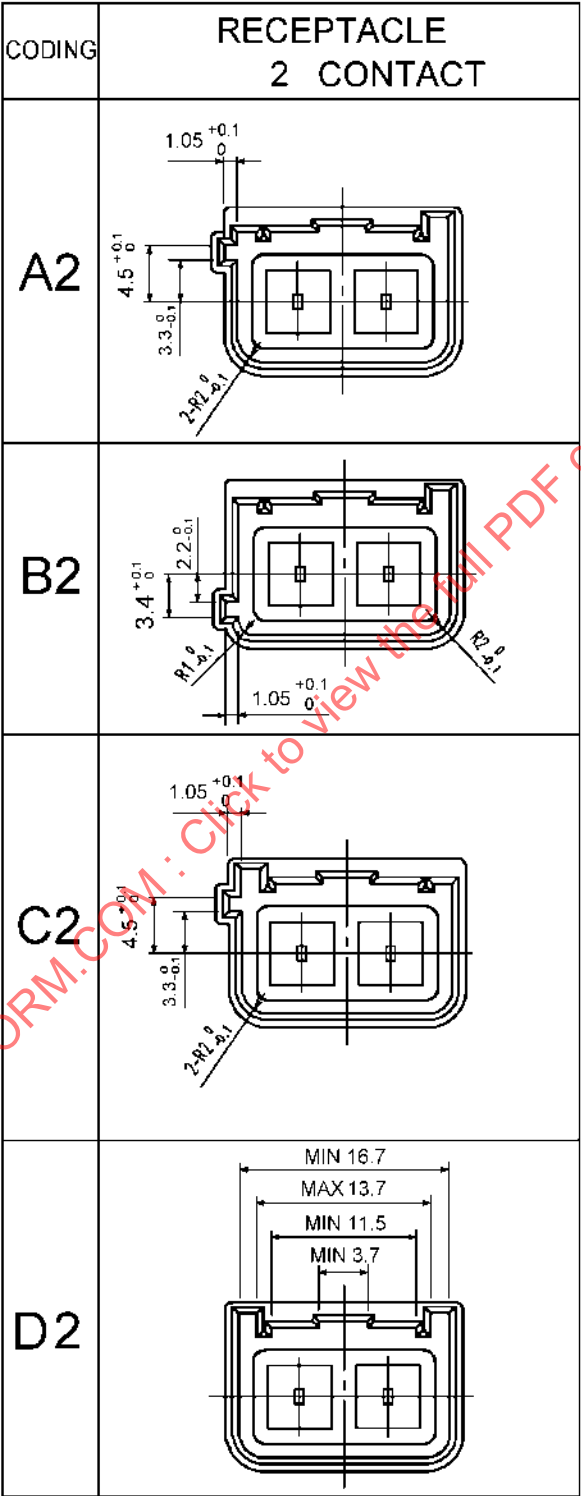


FIGURE 6.2: Two Contact Dimensioning Requirements