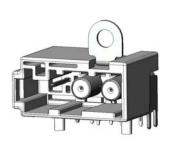


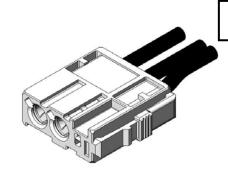


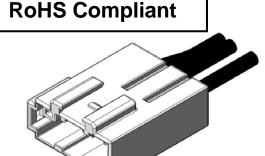
Small Coaxial Connectors for Automotive Antenna

CONNECTOR
MB-0196-3
December 2008

### **CE2 Series**







**Board Connector** 

Cable Connector

Relay Connector

JAE has developed the CE2 Series small coaxial connector for automotive antenna applications.

It is designed for an antenna with frequency up to 1GHz for terrestrial digital media broadcasting, car audio, and car navigation.

The CE2 is available with one or two contact positions and a terminal for power. Two types of metal bracket shapes are available for the board connector.

It is a rugged product with reinforced terminal pulling endurance and improved noise resistance.

#### **Features**

- ■Applicable frequency range up to 1GHz.
- ■Compact type available in several combinations of position and variations, including two types of bracket shapes (board connector) for screw fixing to panel.
- ■Reinforced-type coaxial connector that endures pulling strength over 100N.
- ■Noise resistance characteristic improved by outer terminal that covers entire cable core area.
- Meets the performance required for an automotive connector.

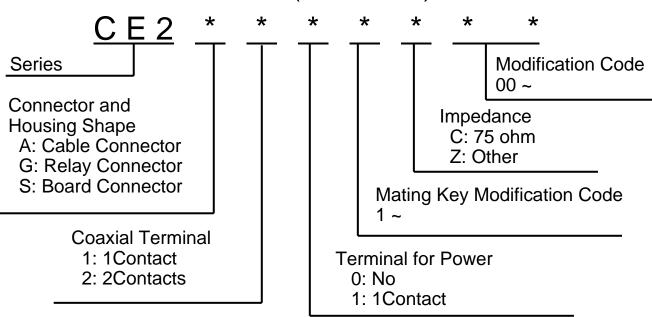
#### **General Specifications**

- ■No. of Contacts: 1, 2 pos. (each available with terminal for power)
- ■Applicable Frequency: DC to 1GHz
- ■Characteristic Impedance: 75 ohm
- ■VSWR: 1.5 max.

- ■Insertion Loss: 0.3 dB max.
- ■Dielectric Withstanding Voltage: AC1000Vr.m.s. (per minute)
- ■Insulation Resistance: 100M ohm min.
- ■Applicable Cable: EM-1.5CS-QFBE

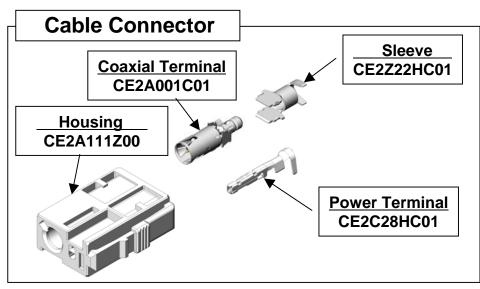
or 1.5C-2V equivalent coaxial connector

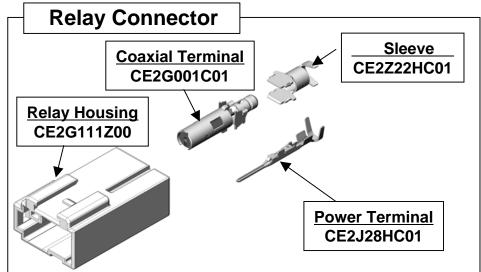
### Product Information (Connector)



### Connector Configuration (Typical Example)



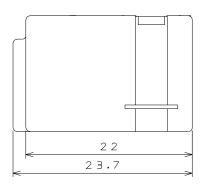




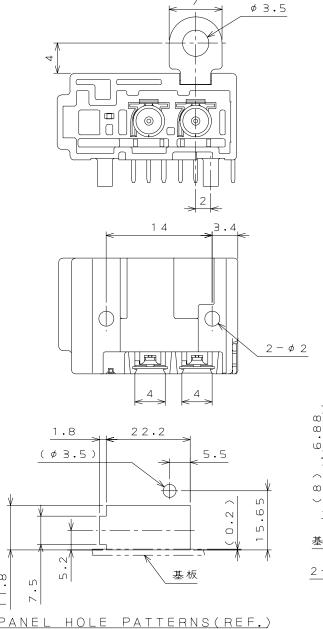
### **Board Connector (Typical Example)**

### ■ CE2S211C02 (Coaxial 2 pos., Power Terminal 1 pos.,

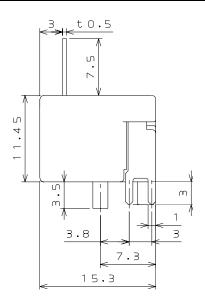
With Bracket [Upward])

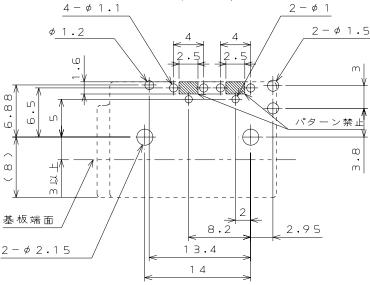


Component	Material / Finish	
Housing	30%GF PBT(Color: Light Gray)	
Inner Terminal	Copper alloy /	
(Coaxial)	Contact area: Au plating over Ni	
	Solder area: Sn plating over Ni	
Outer Terminal	Copper alloy / Sn plating	
(Coaxial)		
Power Terminal	Copper alloy / Sn plating	
Braket	Copper alloy / Sn plating	



パネル取付穴寸法(参考)



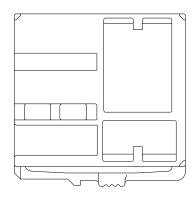


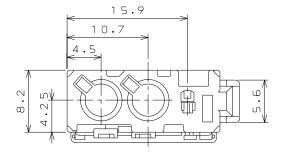
<u>P.C.B. LAYOUT・MOUNTING SIDE(REF.)</u> 基板取付穴寸法(参考・装着面)

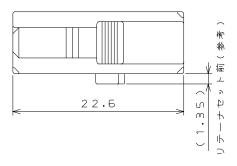
# **Housing (Typical Example)**

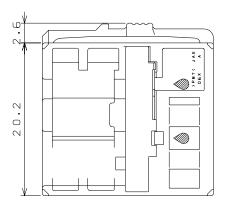
■ CE2A211Z00 (Coaxial 2 pos., Power Terminal 1pos.)

Component	Material / Finish
Housing	PBT (Color: Light Gray)
Retainer	PBT (Color: Gray)





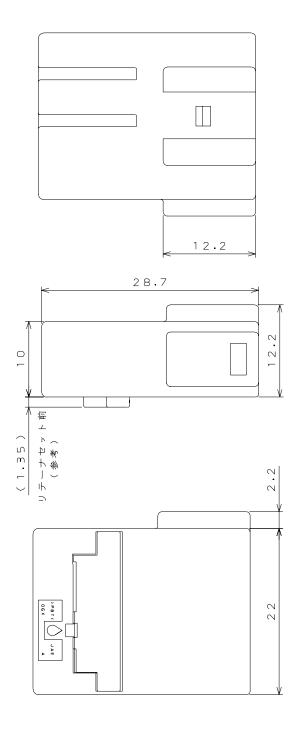


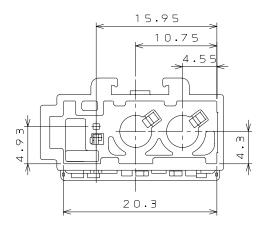


# **Relay Housing (Typical Example)**

### ■ CE2G211Z00 (Coaxial 2 pos., Power Terminal 1pos.)

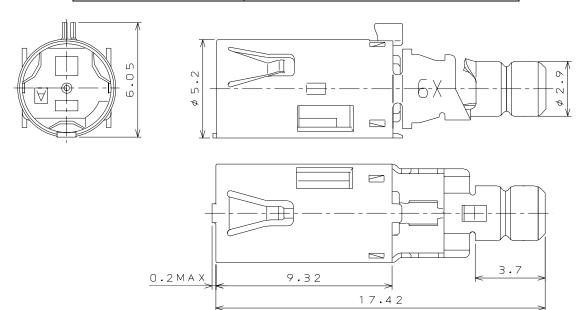
Component	Material / Finish
Housing	PBT (Color: Light Gray)
Retainer	PBT (Color: Gray)





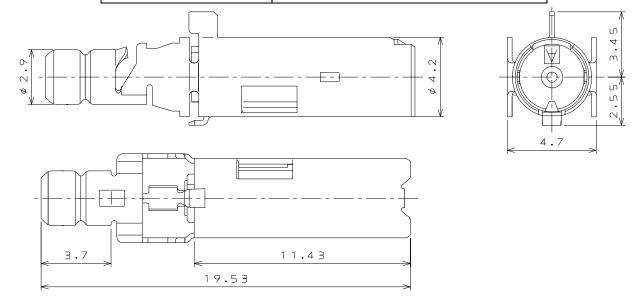
# **Terminal** ■CE2A001C01 Coaxial Terminal (for Cable)

Component	Material / Finish
Inner Housing	30%GF SPS (Color: Black)
Inner Terminal	Copper alloy / Contact area: Au plating over Ni Solder area: Sn plating over Ni
Outer Terminal	Copper alloy / Sn plating



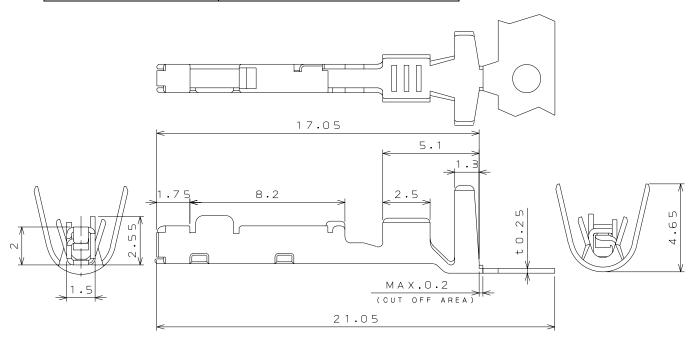
### ■ CE2G001C01 Coaxial Terminal (for Relay)

Component	Material / Finish
Inner Housing	30%GF SPS (Color: Black)
Inner Terminal	Copper alloy / Contact area: Au plating over Ni Solder area: Sn plating over Ni
Outer Terminal	Copper alloy / Sn plating



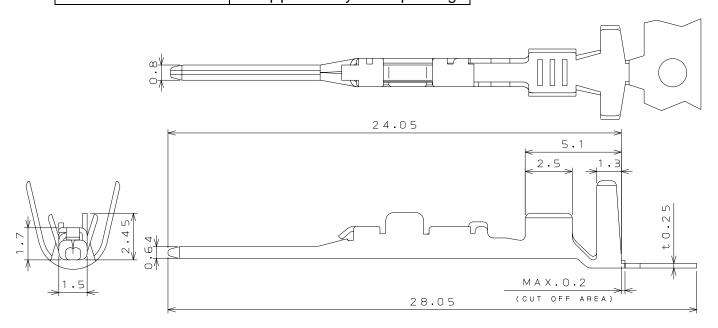
# ■ CE2C28HC01 Power Terminal (for Cable)

Component	Material / Finish
Power Terminal	Copper alloy / Sn plating



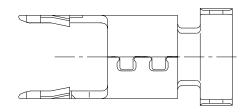
### ■ CE2J28HC01 Power Terminal (for Relay)

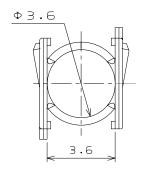
Component	Material / Finish
Power Terminal	Copper alloy / Sn plating

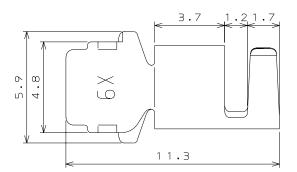


# ■ CE2Z22HC01 (Sleeve)

Component	Material / Finish
Sleeve	Copper alloy / Sn plating







# **Crimp Tool Line-up**

Terminal P/N	Applicable Cable	Semi-Automatic Crimp Applicator
CE2A001C01	EM-1.5CS-QFBE	350-CE2F-2B
Coaxial Terminal (for Cable)	1.5C-2V equivalent	350-CE2TF-2B
CE2G001C01	EM-1.5CS-QFBE	350-CE2M-2B
Coaxial Terminal (for Relay)	1.5C-2V equivalent	350-CE2TM-2B
CE2Z22HC01	EM-1.5CS-QFBE	HC-CE2F-2 (for CE2A001C01)
(Sleeve)	or 1.5C-2V equivalent	HC-CE2M-2 (for CE2G001C01)
CE2C28HC01		
Power Terminal (for Cable)	HAV 0.5sq	350-CE2D-2
CE2J28HC01	11/1/ 0.354	350-GEZD-2
Power Terminal (for Relay)		

# **Product Line-up**

Configuration	Part Number	SJ Drawing	Features
	CE2S101C01	SJ107598	Coaxial 1 pos., Bracket [Sideway]
	CE2S101C02	SJ107323	Coaxial 1 pos., Bracket [Upward]
	CE2S111C01	SJ107599	Coaxial 1 pos., Power 1 pos., Bracket [Sideway]
Board	CE2S111C02	SJ107324	Coaxial 1 pos., Power 1 pos., Bracket [Upward]
Connector	CE2S201C01	SJ107202	Coaxial 2 pos., Bracket [Sideway]
	CE2S201C02	SJ107600	Coaxial 2 pos., Bracket [Upward]
	CE2S211C01	SJ107322	Coaxial 2 pos., Power1 pos., Bracket [Sideway]
	CE2S211C02	SJ107597	Coaxial 2 pos., Power1 pos., Bracket [Upward]
	CE2A101Z00	SJ107211	Coaxial 1 pos
Housing	CE2A111Z00	SJ107334	Coaxial 1 pos., Power 1 pos.
Housing CE	CE2A201Z00	SJ107212	Coaxial 2 pos
	CE2A211Z00	SJ107333	Coaxial 2 pos., Power 1 pos.
	CE2G101Z00	SJ107213	Coaxial 1 pos
Relay	CE2G111Z00	SJ107331	Coaxial 1 pos., Power 1 pos.
Housing	CE2G201Z00	SJ108209	Coaxial 2 pos
	CE2G211Z00	SJ107332	Coaxial 2 pos., Power 1 pos.
Terminal	CE2A001C01	SJ107214	Coaxial Terminal (for Cable)
	CE2G001C01	SJ107215	Coaxial Terminal (for Relay)
	CE2Z22HC01	SJ107216	Sleeve (for Coaxial Terminal), 2200 pcs. / Reel
	CE2C28HC01	SJ107335	Power Terminal (for Cable), 2800 pcs. / Reel
	CE2J28HC01	SJ107336	Power Terminal (for Relay), 2800 pcs. / Reel

#### **Others**

Specification

JACS-20084

Handling Instruction

JAHL-20084-1 (for Terrestrial Digital Media Broadcasting) JAHL-20084-3 (for Audio Cable)

### Japan Aviation Electronics Industry, Limited

**Product Marketing Division** 

Aobadai Building, 3-1-19, Aobadai, Meguro-ku, Tokyo 153-8539 Phone: +81-3-3780-2787 FAX: +81-3-3780-2946 **Notice:** Products shown in this leaflet are made for the applications listed below. However, if the above-mentioned products are to be used in aerospace devices, marine cable-connection devices, atomic power control systems, medical equipment for life-support systems, or any other specific application requiring extremely high reliability, please contact JAE for further information.

Recommended applications: computers, office machines, measuring devices,

telecommunication devices (terminals, mobile devices), AV devices, household applications, FA devices, etc.





### Compact Coaxial Connectors for Digital Radio

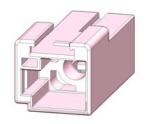
# CE2 Series ( $50\Omega$ )

CONNECTOR MB-0258-1 April 2013

#### **RoHS Compliant**







**Board Connector** 

Cable Connector

Relay Connector

JAE has developed the CE2 Series (50 $\Omega$ ) connector for digital radio as an addition to the existing CE2 Series (75 $\Omega$ ) coaxial connector for automotive antenna applications.

Digital radio popularity is primarily in Europe and the United States, but the CE2 Series (50  $\Omega$ ) can also be used for terrestrial digital television broadcast applications.

The CE2 Series is now available in three developed pin count variations: coaxial 1 position, coaxial 2 position, and coaxial 1 position with terminal 1 position.

Having equivalent performance with the existing CE2 Series and enhanced terminal pulling endurance and noise resistance, this product was made to satisfy a wide range of requirements.

#### **Features**

- ■Applicable frequency range is up to 1.5 GHz.
- ■Compact type available in three developed pin count variations. Board type has brackets for screw fixing to panel. (Not available for coaxial 2 position type.)
- ■Noise resistance enhanced by an outer terminal structure that covers entire cable core area.
- Meets the performance requirements for an automotive connector.

#### General Specifications

■No. of Contacts:

coaxial 1 pos., coaxial 2 pos., coaxial 1 pos.+ power terminal 1 pos.

■ Applicable Frequency: DC to 1.5GHz

■Characteristic Impedance: 50  $\Omega$ 

■VSWR: 1.8 max.

■Insertion Loss: 1.0 dB max.

■Dielectric Withstanding Voltage: AC1000Vr.m.s. (per minute)

■Insulation Resistance: 100M  $\Omega$  min.

■Applicable Cable: 1.5DS-QEHV or 1.5D-2V equivalent coaxial wire

### ■ Ordering Information (Connector, Housing)

**Coaxial Terminal** 

1: 1 Contact

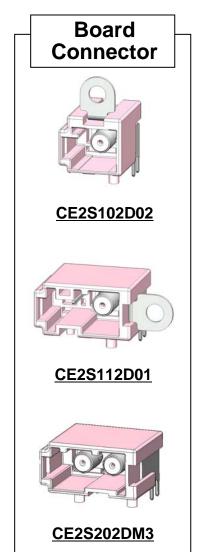
2: 2 Contacts

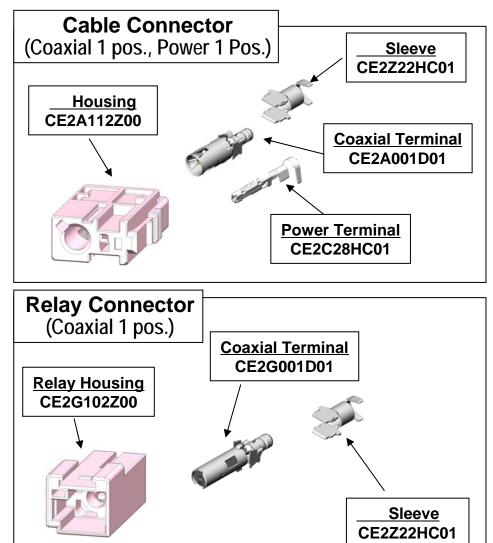
**Terminal for Power** 

0: No

1: 1 Contact

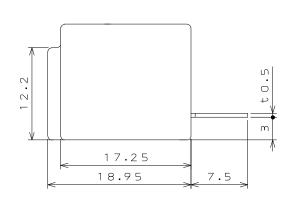
# ■ Connector Configuration



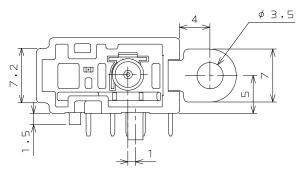


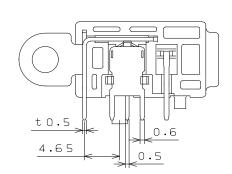
### **Board Connector**

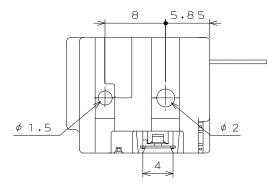
# ■ CE2S112D01 (Coaxial 1 pos., Power Terminal 1 pos., With Side Bracket)

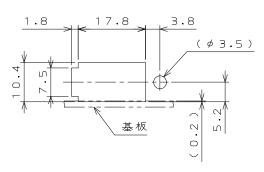


Component	Material / Finish
Housing	30% GF PBT (Color: Light pink)
Inner Terminal	Copper alloy /
(Coaxial)	Contact area: Au plating over Ni
	Solder area: Sn plating over Ni
Outer Terminal	Copper alloy / Sn plating
(Coaxial)	
Power Terminal	Copper alloy / Sn plating
Bracket	Copper alloy / Sn plating

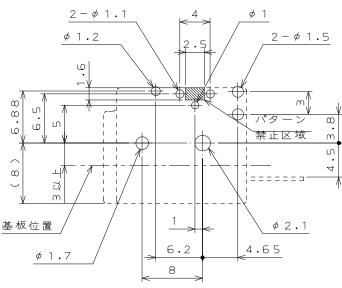








<u>PANEL HOLE PATTERNS (REF.</u>) パネル取付穴寸法(参考)

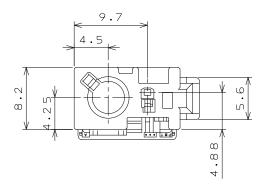


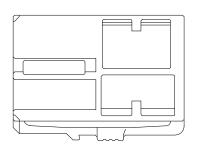
<u>P.C.B. LAYOUT・MOUNTING SIDE(REF.)</u> 基板取付穴寸法(参考・装着面)

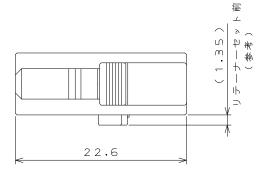
# Housing

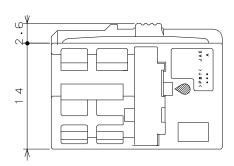
# ■ CE2A112Z00 (Coaxial 1 pos., Power Terminal 1pos.)

Component	Material / Finish
Housing	PBT (Color: Light pink)
Retainer	PBT (Color: Gray)





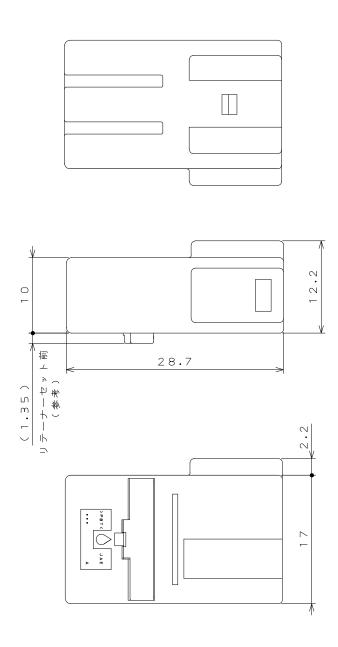


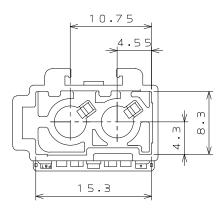


# Relay Housing

# ■ CE2G202Z00 (Coaxial 2 pos.)

Component	Material / Finish
Housing	PBT (Color: Light pink)
Retainer	PBT (Color: Gray)

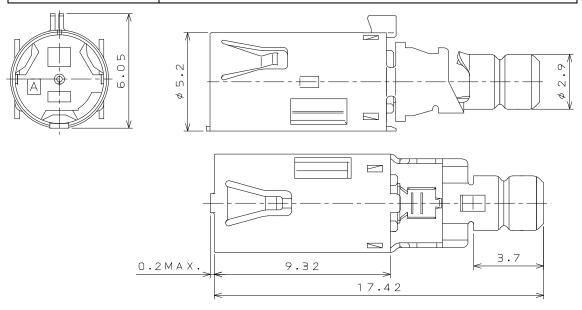




# **Terminal**

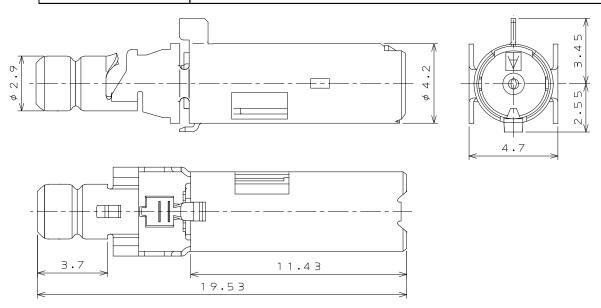
### ■ CE2A001D01 Coaxial Terminal (for Cable)

Component	Material / Finish
Inner Housing	30% GF SPS (Color: Light blue)
Inner Terminal	Copper alloy / Contact area: Au plating over Ni Terminal area: Reflow Sn plating over Ni
Outer Terminal	Copper alloy / Sn plating



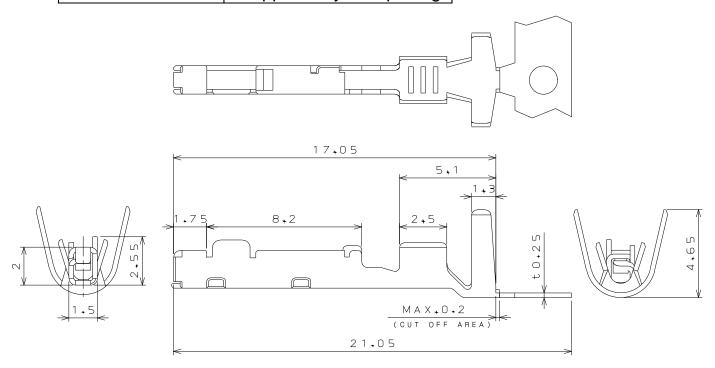
## ■ CE2G001D01 Coaxial Terminal (for Relay)

Component	Material / Finish
Inner Housing	30%GF SPS (Color: Light blue)
	Copper alloy / Contact area: Au plating over Ni
Inner Terminal	Terminal area: Reflow Sn plating over Ni
Outer Terminal	Copper alloy / Sn plating



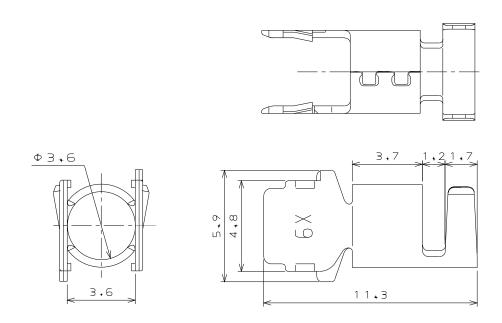
# ■ CE2C28HC01 Power Terminal (for Cable)

Component	Material / Finish
Power Terminal	Copper alloy / Sn plating



### ■ CE2Z22HC01 (Sleeve)

Component	Material / Finish
Sleeve	Copper alloy / Sn plating



# **Product Line-up**

Configuration	Part Number	SJ Drawing	Features	
Board	CE2S102D02	SJ111024	Coaxial 1 pos., Bracket (Upward)	
	CE2S112D01	SJ111025	Coaxial 1 pos., Power 1 pos., Bracket (Sideway)	
CE2S202DM3		SJ112959	Coaxial 2 pos., Without bracket	
	CE2A102Z00	SJ111022	Coaxial 1 pos.	
Housing CE2A112Z00	SJ111023	Coaxial 1 pos., Power 1 pos.		
	CE2A202Z00	SJ112958	Coaxial 2 pos.	
Relay	CE2G102Z00	SJ113866	Coaxial 1 pos.	
Housing	CE2G202Z00	SJ112960	Coaxial 2 pos.	
	CE2A001D01	SJ111021	Coaxial Terminal (for Cable)	
Terminal CE	CE2G001D01	SJ112285	Coaxial Terminal (for Relay)	
Temma	CE2Z22HC01	SJ107216	Sleeve (for Coaxial Terminal), 2200 pcs. / Reel	
CE2C28HC01 SJ1		SJ107335	Power Terminal (for Cable), 2800 pcs. / Reel	

# **Crimp Tool Line-up**

Terminal P/N	Applicable Cable	Semi-Automatic Crimp Applicator	
CE2A001D01	1.5DS-QEHV	350-CE2F3-2C	
Coaxial Terminal (for Cable)	1.5D5-QL11V	350-GEZF3-2G	
CE2G001D01	1.5DS-QEHV	350-CE2M3-2C	
Coaxial Terminal (for Relay)	1.5D5-QL11V	350-CEZIVIS-2C	
CE2Z22HC01	1.5DS-QEHV	HC-CE2F-2C (for CE2A001D01)	
(Sleeve)	1.505-QETV	HC-CE2M-2C (for CE2G001D01)	
CE2C28HC01	HAV 0.5sq	3502-CE2D-2	
Power Terminal (for Cable)	HAV 0.354	3302-CE2D-2	

### **Others**

Specification

JACS-20111

Handling Instruction

JAHL-20084-5

#### **Notice:**

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change

Contact our sales staff for further information before considering or ordering any of our products. For purchase, a product specification must be agreed upon.

- 2. Please contact us if you are considering use involving a
- quality assurance program that you specify or that is peculiar to the industry. Also contact us regarding the details of use, usage, specification before considering or ordering any of our
- 3. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.

**Product Marketing Division** 

Aobadai Building, 3-1-19, Aobadai, Meguro-ku, Tokyo 153-8539 Phone: +81-3-3780-2882 FAX: +81-3-3780-2946

Japan Aviation Electronics Industry, Limited

<sup>\*</sup> The specifications in this brochure are subject to change without notice. Please contact JAE for information.

### **Mouser Electronics**

**Authorized Distributor** 

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#### **JAE Electronics:**

<u>CE2A001C01</u> <u>CE2A111Z00</u> <u>CE2C28HC01</u> <u>CE2G001C01</u> <u>CE2G111Z00</u> <u>CE2J28HC01</u> <u>CE2S101C02</u> CE2S111C01 CE2S211C02 CE2Z22HC01