



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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DEUTSCH CTJ Series Common Termination System

AS81714 Series II Qualified Products Offer Robust and Highly Reliable Wire Termination in Demanding Environments

DEUTSCH CTJ Series

Common Termination Systems — AS81714 Series II

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RUGGED

- Many parts qualified to SAE-AS81714
- Integrated bus bar technology

ENVIRONMENTALLY SEALED

- Resists fluids commonly found in aerospace and defense applications
- Helps prevent foreign object debris issues

EASY TO USE

- Insertable modules that can be easily removed and reinserted into rails with tools

APPLICATIONS

- Commercial Air
- Space
- Military Ground
- Military Aerospace



The DEUTSCH CTJ Series common termination system from TE Connectivity (TE) is a system of wires and components that are interconnected to one another by the use of a standard AS39029 socket contact only. This eliminates the need for pin contacts which are located in the mating components. Bussed cavities use our single-pin bus bar design. There are multiple design options available to customize the modules, junctions, splices and rails available in Mil Spec-approved AS81714 Series II and non-qualified proprietary designs.

TE Advantage

DEUTSCH AS39029 Contacts. All assemblies—modules, splices, etc.—are supplied with DEUTSCH AS39029 socket contacts, which are designed to meet AS39029 standard for ruggedness and vibration resistance.

Customization. Products can be customized to help meet your specific needs.

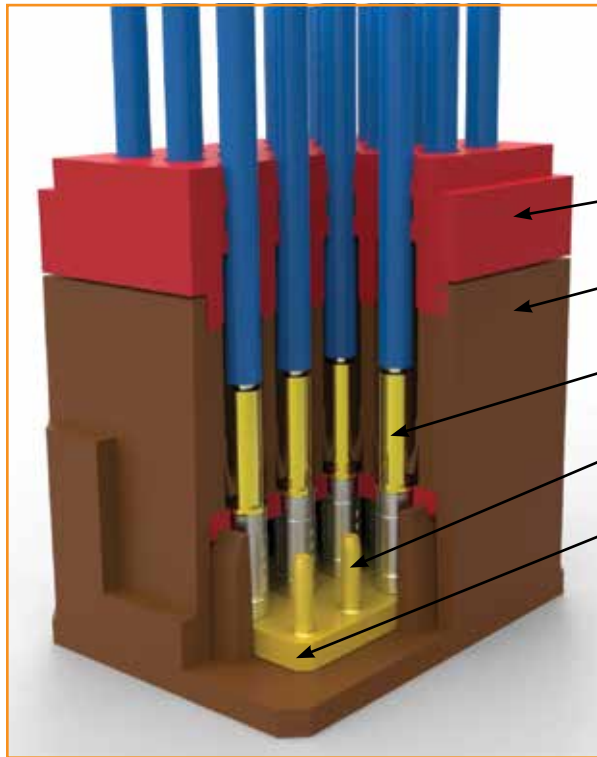
Single Rail Assembly. We offer rail assemblies for single-mount components.

Easy Assembly. We offer easy insertion and removal of single rails inside multimodule assemblies.

TE Components . . . TE Technology . . . TE Know-how . . .

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem
SEACON | Rochester | DEUTSCH

Empower Engineers to Solve Problems, Moving the World Forward.



Environmentally Sealed Grommet

Housing

Wire-Applied AS39029 Socket Contact

Integral Pin Contact

Bussed Cavities Single Pin Bus Bar

CTD Bussing Modules for power distribution.

CTJ1 Feedback Modules with various bussing arrangements.

CTJ4 Electronic Component Modules design based upon Mil-T-81714/62 electronic modules. Modules are available with a variety of diodes, resistors, capacitors, and fuses, with both M81714/62 equivalents and additional configurations.

CTJ5 Board-Mount Modules include solder pin contacts for direct mounting to pc boards and flex cable. By eliminating the need for a mounting rail, CTJ5 modules provide a flexible and compact solution.

CTJ6 Plug and CTJ9 Receptacle Connectors provide a small, lightweight method of connecting/disconnecting multiple wires. Available in flange-mount and in-line versions.

CTJ7 Grounding Modules, using either flange mount or stud mount, provide sealed multiwire grounding solutions.

CTJ2 Metallic Mounting Bracket are aluminum alloy and designed to hold one single module or two half-size modules.

CTJ3 Metallic Rails use aluminum alloy and stainless steel clips. They are available with a variety of finishes and sizes ranging from 2 to 40 inches.

DCR Composite Rails are a lightweight alternative to CTJ3 rails, offering up to 48% weight savings and available in lengths from 2 to 20 inches.

Junctions and Splices

CTL, CTM and CTN In-Line Junctions connect two to four wires in-line and multijunctions for housing and sealing individual components. The CTL is an in-line junction for single wires. The CTM connects and buses two, three, or four wires. The CTN series connects contacts electrically with diodes, capacitors, fuses, or resistors.

Composite In-Line Junctions are composite versions of the CTL, CTM, and CTN series with electronic components design-in customization.

CTJ Grounding Junctions provide a simple method of terminating wire to ground using standard AS39029 contacts.



CTJ Mil Spec Series General Specifications

The CTJ Mil Spec Series meet requirements of SAE-AS81714.

Dielectric Withstanding Voltage (AS81714 paragraph 3.5.6):

At Sea Level: 1500 VAC_{rms}
At 110,000 Ft: 200 VAC_{rms}

Insulation Resistance (AS81714 paragraph 3.5.11): 5000 MΩ min. at 25°C

Operating Temperature: -65°C to +200°C

Physical Shock: 78 g in each of the 3 mutually perpendicular planes

Vibration: Maintains continuity to minimize mechanical or physical damage during or after vibration following vibration levels

Level 1—34 minutes per axis

20–90 Hz at 6 dB/oct. rise
90–300 Hz at 1.0 g²/Hz
300–2000 Hz at 6 dB/oct. fall

Level 2—14 minutes per axis

20–40 Hz at 6 dB/oct. rise
40–350 Hz at 0.5 g²/Hz
350–2000 Hz at 6 dB/oct. fall
No discontinuities greater than 1 microsecond

Corrosion: 48 hours of salt spray

Magnetic Permeability: 2.0 μ max.

Fluid Resistance:

- MIL-PRF-5606: Hydraulic fluid
- MIL-DTL-83133: JP-8 aviation fuel
- MIL-PRF-7808: Lubricating oil
- MIL-PRF-23699: Lubricating oil
- MIL-A-8243: Deicing/defrosting fluid
- MIL-C-25769: Aircraft cleaning compound
- MIL-PRF-87937: Aircraft cleaning compound
- MIL-G-3056: Gasoline

Materials

Housing: Composite

Bus Bar/Pins: Copper alloy, plated gold

Sealing Grommet: Elastomer, fluid resistant and environmentally sealed

Metal Rails (CTJ2 and CTJ3): Aluminum alloy, nickel plated (standard). Also available with anodized, olive drab cadmium, or clear finishes. Stainless steel clips

DCR Rails: Composite

Contact Resistance (at 25°C)

Meets AS39029 paragraph 3.5.4

Wire Size	Test Current	Voltage Drop
22 AWG	5 A	73 mV
20 AWG	7.5 A	55 mV
16 AWG	13 A	50 mV
12 AWG	23 A	42 mV

Usable Wire Size

Meets AS39029 paragraph 3.4.2

Contact	Wire Range (AWG)	Current Rating
Size 22	26–22	5 A
Size 20	24–20	7.5 A
Size 16	16–20	13 A
Size 12	14–12	23 A

Grommet Sealing Range

Contact Size	Wire OD	
	Min.	Max.
22	0.030	0.060
20	0.040	0.083
16	0.065	0.109
12	0.097	0.142



DEUTSCH CTD and CTJ1 Power Distribution and Feedback Modules

EASY TO USE

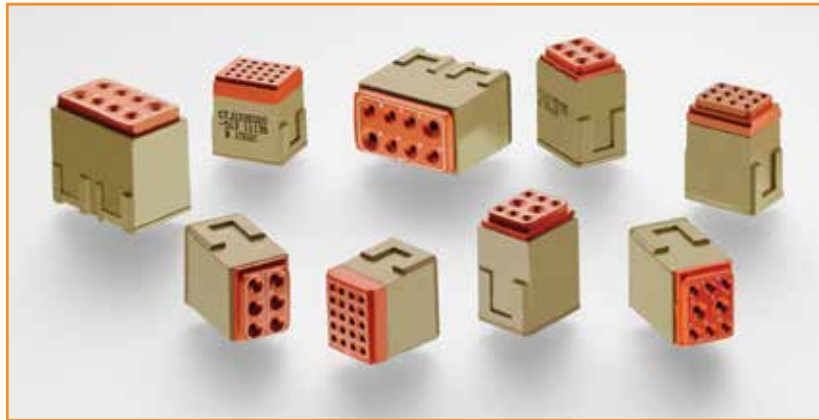
- Busses 6 to 20 contacts in a small area
- Internal bus bars are configured to allow connections of various combinations of wires

RUGGED

- Uses a rugged A39029 socket contact mated to one-piece (cold-headed) internal pin bus bars
- Excellent vibration resistance
- Environmentally sealed

CONVENIENT

- Modules fit in single, multiple, composite or metal rails with multiple mounting options
- CTD distribution modules accommodate different sizes of contacts within the same bus



CTD power distribution and CTJ feedback modules for rugged, environmentally sealed bussing of wires.

Specifications

Dielectric Withstanding Voltage (AS81714 paragraph 3.5.6):

At Sea Level: 1500 VAC_{rms}
At 110,000 Ft: 200 VAC_{rms}

Insulation Resistance (AS81714 paragraph 3.5.11): 5000 M Ω min. at 25°C

Operating Temperature: -65°C to +200°C

Vibration: Maintains continuity to minimize mechanical or physical damage during or after vibration levels stated in tested specifications

Corrosion: 48 hours of salt spray

Fluid Resistance:

MIL-PRF-5606: Hydraulic fluid
MIL-DTL-83133: JP-8 aviation fuel
MIL-PRF-7808: Lubricating oil
MIL-PRF-23699: Lubricating oil
MIL-A-8243: Deicing/defrosting fluid
MIL-C-25769: Aircraft cleaning compound
MIL-PRF-87937: Aircraft cleaning compound
MIL-G-3056: Gasoline

Materials

Housing: Composite

Bus Bar/Pins: Copper alloy, plated gold

Pin Contacts: Gold over copper

Sealing Grommet: Elastomer, fluid resistant and environmentally sealed

DEUTSCH CTJ Series Common Termination System



Contact Resistance (at 25°C) Meets AS39029 paragraph 3.5.4

Wire Size	Test Current	Voltage Drop
22 AWG	5 A	73 mV
20 AWG	7.5 A	55 mV
16 AWG	13 A	50 mV
12 AWG	23 A	42 mV

Grommet Sealing Range

Contact Size	Wire OD	
	Min.	Max.
22	0.030	0.060
20	0.040	0.083
16	0.065	0.109

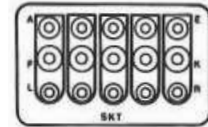
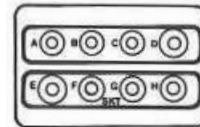
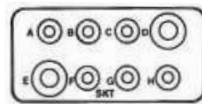
Usable Wire Size

Meets AS39029 paragraph 3.4.2

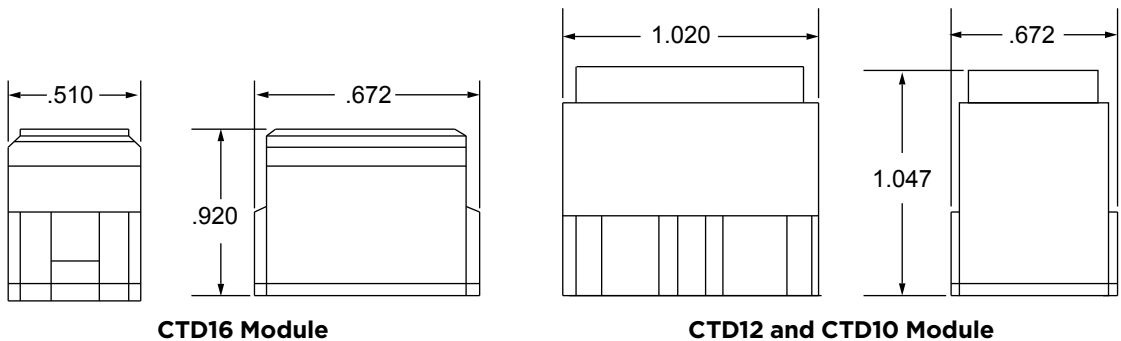
Contact	Wire Range (AWG)	Current Rating
Size 22	26-22	5 A
Size 20	24-20	7.5 A
Size 16	16-20	13 A
Size 12	14-12	23 A

CTD Series

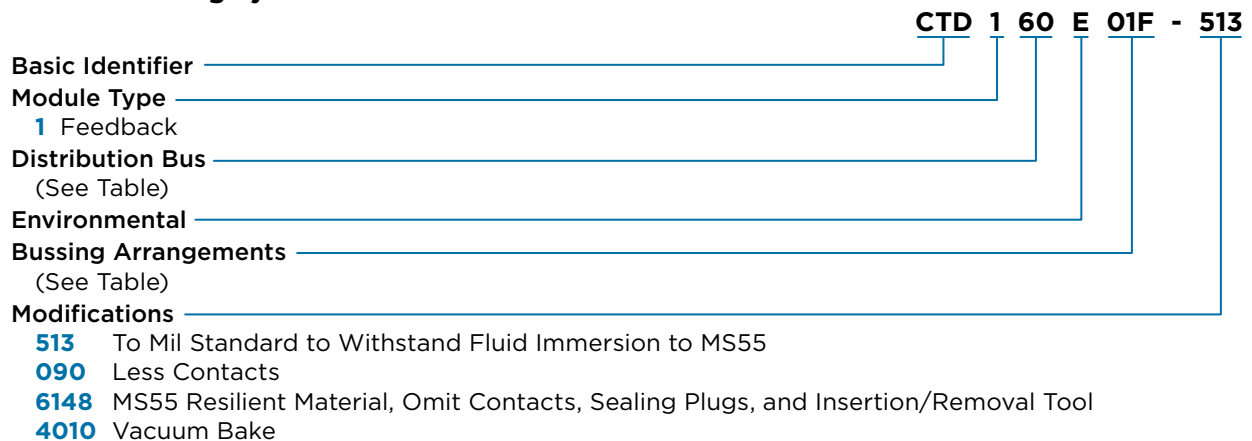
Distribution Bussing Arrangements



Part No.	CTD126E01A	CTD160E01F	CTD126E02E	CTD1062E05A
No. of Busses	1	1	2	5
Contacts per Bus	2 Size 12 6 Size 16 —	2 Size 16 6 Size 20 —	1 Size 12 3 Size 16 —	1 Size 12 1 Size 20 1 Size 22
Distribution Bus	26	60	26	062
Bussing Arrangement	01A	01F	02E	05A



Part Numbering System





CTJ1 Series

Feedback Bussing Arrangements

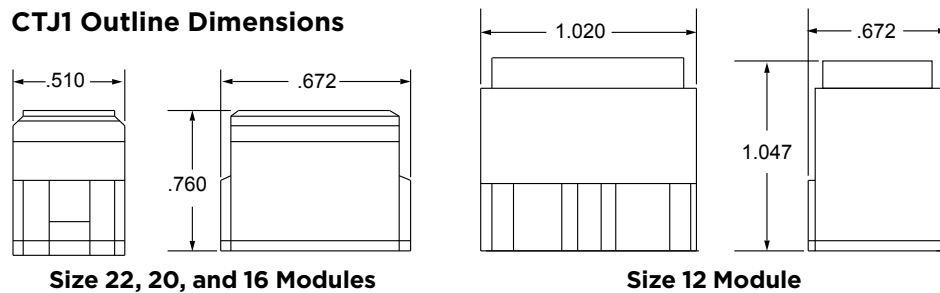
Size 22 Contacts Quantity: 20							
	No. of Busses	1	2	5	6	10	4
Bus Code	01C	02D	05E	06B	10A	04F	

Size 20 Contacts Quantity: 12						
	No. of Busses	1	2	3	4	6
Bus Code	01B	02C	03D	04A	06E	

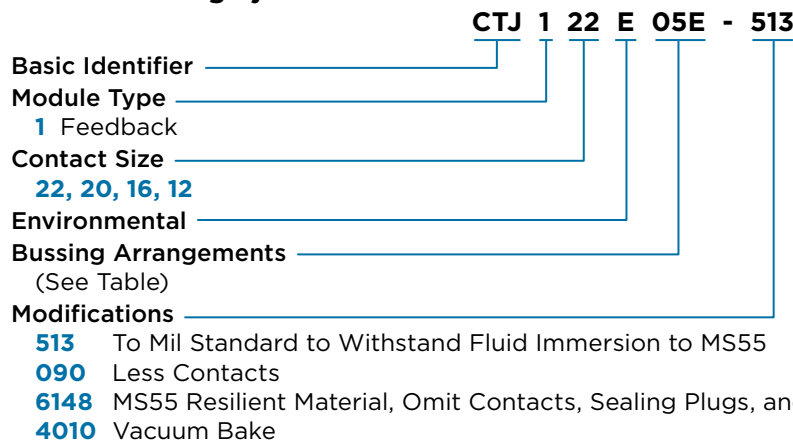
Size 16 Contacts Quantity: 6			
	No. of Busses	1	2
Bus Code	01D	02B	03A

Size 12 Contacts Quantity: 6			
	No. of Busses	1	2
Bus Code	01E	02A	03B

CTJ1 Outline Dimensions



Part Numbering System



Ordering Information

Module	Part No.
Size 22	CTJ122Exxx-yyy
Size 20	CTJ120Exxx-yyy
Size 16	CTJ116Exxx-yyy
Size 12	CTJ112Exxx-yyy

xxx = bussing arrangements
yyy = modification codes



DEUTSCH CTJ4 Series Electronic Component Modules

CONVENIENT

- May be placed near transient suppression devices that they are designed to protect
- Each module houses small printed circuit boards incorporating a variety of discrete electronic components
- Uses crimp-tool terminations and a housing system for discrete components and circuits
- Lightweight composite technology for weight-saving solutions

ROBUST

- Fluid resistant in most military or aerospace environments
- Input/output wiring is sealed with elastomer grommet to help protect against environmental hazards
- Designed to the electronic requirements of MIL-T-81714/62

VERSATILE

- Available with a variety of discrete electronic components with both M81714/62 equivalents and additional configurations



CTJ4 electronic component modules are designed to the requirements of MIL-T-81714/62. Modules are available with a variety of diodes, resistors, capacitors and fuses, with both M81714/62 equivalents and additional configurations.

Specifications

Operating Temperature: -65°C to +200°C or IAW Electronic Component (whichever has the lesser requirement)

Thermal Shock and Vibration: In accordance with AS81714 or in accordance with electronic component (whichever has the lesser requirement)

Fluid Resistance:

- MIL-PRF-5606: Hydraulic fluid
- MIL-DTL-83133: JP-8 aviation fuel
- MIL-PRF-7808: Lubricating oil
- MIL-PRF-23699: Lubricating oil
- MIL-A-8243: Deicing/defrosting fluid
- MIL-PRF-87937: Aircraft cleaning compound
- MIL-G-3056: Gasoline

Materials

Housing: Composite

Pin Contacts: Gold over copper

Sealing Grommet: Elastomer, fluid resistant and environmentally sealed

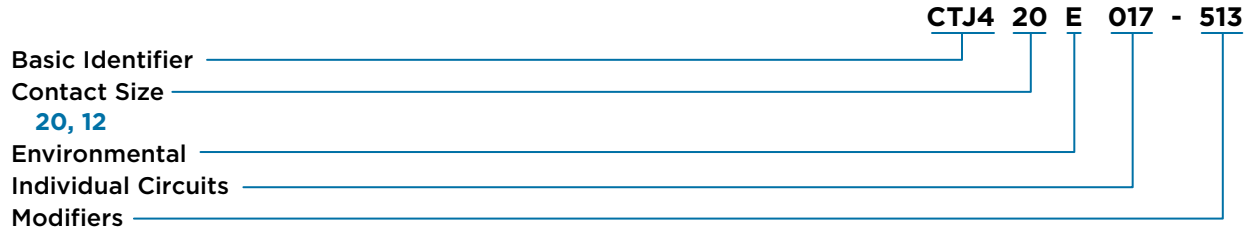


Usable Wire Size

Meets AS39029 paragraph 3.4.2

Contact	Wire Range (AWG)	Current Rating
Size 20	24-20	7.5 A
Size 12	14-12	23 A

Part Numbering System



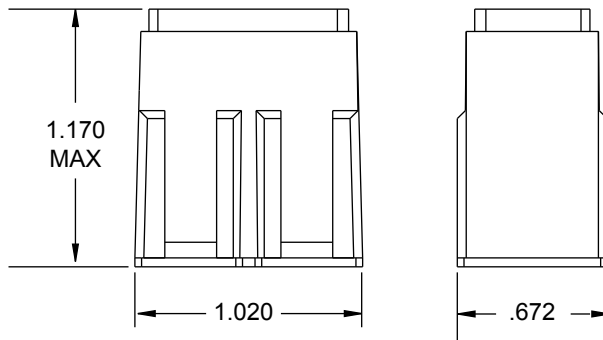
- 513** Elastomer change to meet AS81714 Fluid Requirements
- 090** Less Contacts
- 6148** Elastomer change to meet AS81714 Fluid requirements, less contacts, less sealing Plugs and less Insertion/Removal Tools
- 4010** Vacuum Bake

Ordering Information

Contact	Part No.
Size 20	CTJ420E-xxx-yyy
Size 12	CTJ412E-xxx-yyy

xxx = individual electronic circuits
yyy = modification code

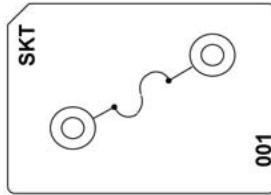
Outline Dimensions



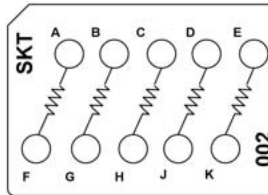
CTJ4 Modules



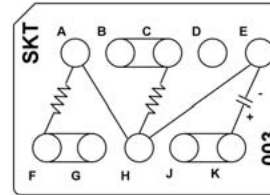
CTJ4 Circuit Configurations



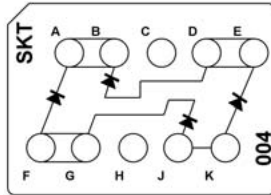
CTJ412E001
One 15 A, 125 V Fuse



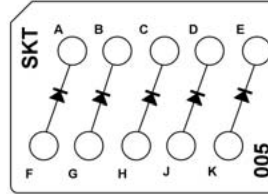
CTJ420E002
Five 150 Ω Resistors, 1/4 W



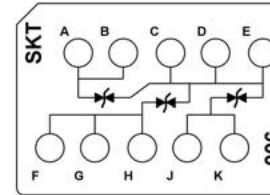
CTJ420E003
Two 150 Ω Resistors, 1/4 W
One 10 μF Capacitor, 35 WVDC



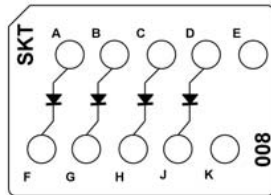
CTJ420E004
One VE08 Rectifier



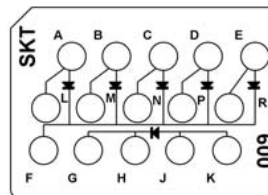
CTJ420E005
Five JANTX 1N4246 or
JANTX 1N5616 Diodes



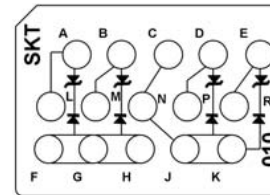
CTJ420E006
Three JANTX 1N6054A
Zener Diodes



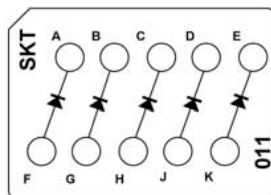
CTJ420E008
Four JANTX 1N3613 Diodes



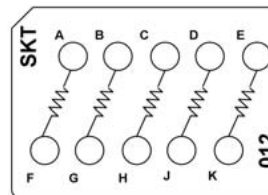
CTJ420E009
Six JANTX 1N5618 Diodes



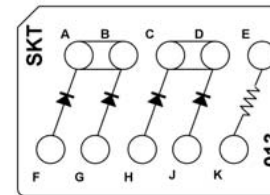
CTJ420E010
Four JANTX 1N5618 Diodes
Four JANTX 1N4478 Zener Diodes



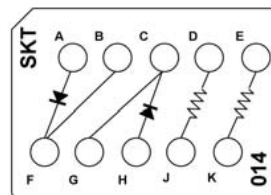
CTJ420E011
Five JANTX 1N5618 Diodes



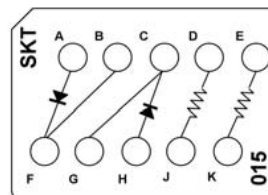
CTJ420E012
Five 10 kΩ Resistors, 1/10 W



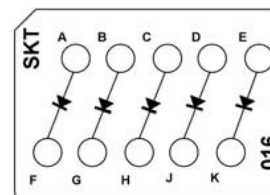
CTJ420E013
Four JANTX 1N5618 Diodes
One 200 Ω Resistor, 1/8 W



CTJ420E014
Two RNC55H1002BP Diodes
Two 10 kΩ Resistors, 1/10 W



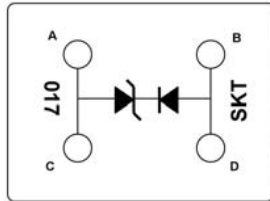
CTJ420E015
Two JANTX 1N5618 Diodes
One 10 kΩ Resistor, 1/10 W
One 110 Ω Resistor, 1/10 W



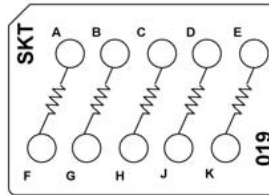
CTJ420E016
Five JANTX 1N5618 Diodes



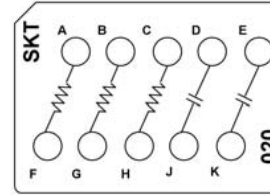
CTJ4 Circuit Configurations



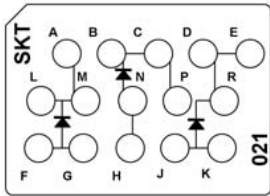
CTJ420E017
One JANTX 1N5618 Diode
One JANTX 1N4478 Zener Diode



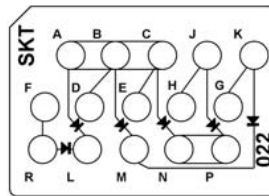
CTJ420E019
One 1.10 kΩ Resistor, 1/10 W
One 1.40 kΩ Resistor, 1/10 W
One 20 kΩ Resistor, 1/10 W
Two 10 kΩ Resistors, 1/10 W



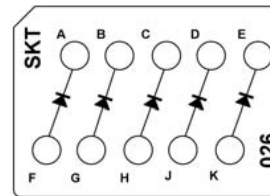
CTJ420E020
Two 3.6 kΩ Resistors, 1/10 W
One 100 kΩ Resistor, 1/10 W
Two 1 μF Capacitors, 50 WVDC



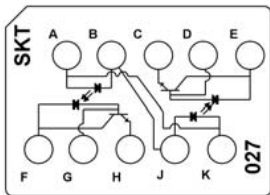
CTJ420E021
Three JANTX 1N5550 Diodes



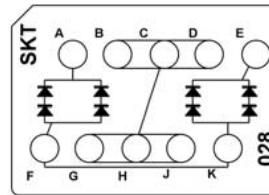
CTJ420E022
Six JANTX 1N5809 Diodes



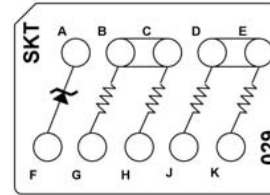
CTJ420E026
Five JANTX 1N5620 Diodes



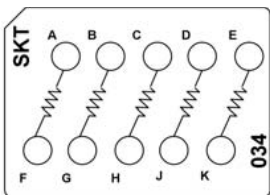
CTJ420E027
Two 66099-108 or
66139-101 ISO Cubes



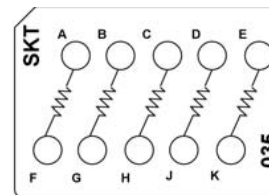
CTJ420E028
Eight JANTX 1N5550 Diodes



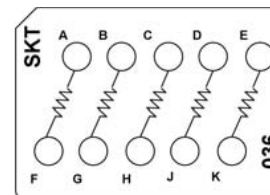
CTJ420E029
Two 10 kΩ Resistors, 1/10 W
Two 1.43 kΩ Resistors, 1/10 W
One JANTX1N4954 Zener Diode



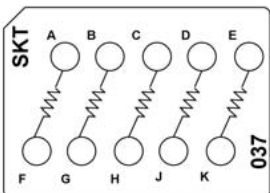
CTJ420E034
Five 150 Ω Resistors, 1/10 W



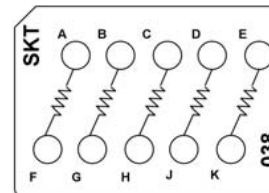
CTJ420E035
Five 10.2 kΩ Resistors, 1/10 W



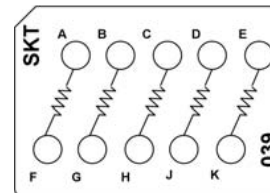
CTJ420E036
Five 2.8 kΩ Resistors, 1/10 W



CTJ420E037
Five 23.2 kΩ Resistors, 1/20 W



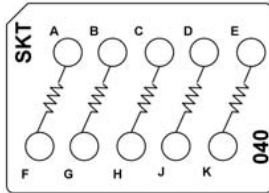
CTJ420E038
Five 24.9 kΩ Resistors, 1/20 W



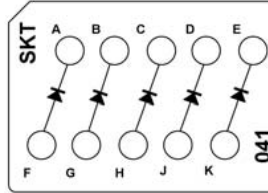
CTJ420E039
Five 41.2 kΩ Resistors, 1/20 W



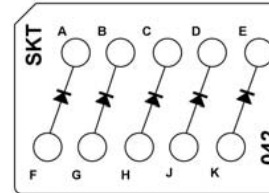
CTJ4 Circuit Configurations



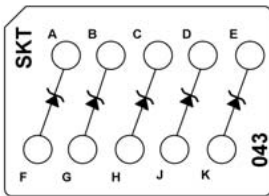
CTJ420E040
Five 49.9 kΩ Resistors, 1/20 W



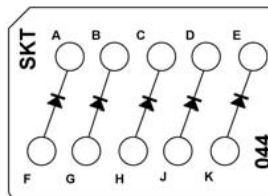
CTJ420E041
Five JANTX 1N5550 Diodes



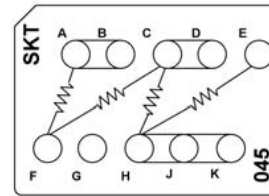
CTJ420E042
Five JANTX 1N5418 Diodes



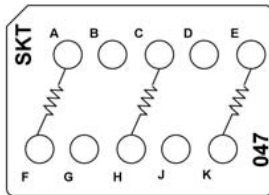
CTJ420E043
Five JANTX 1N827 Zener Diodes



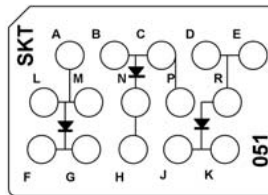
CTJ420E044
Five JANTX 1N5552 Diodes



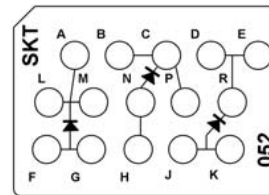
CTJ420E045
Two 40 kΩ Resistors, 1/10 W
Two 50 kΩ Resistors, 1/10 W



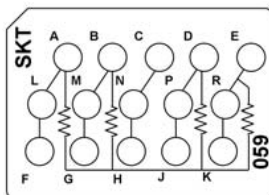
CTJ420E047
Three 60.4 or 59 Ω Resistors, 2 W



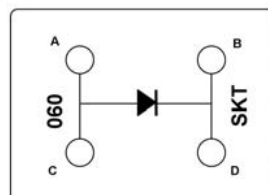
CTJ420E051
Three JANTX 1N5618 Diodes



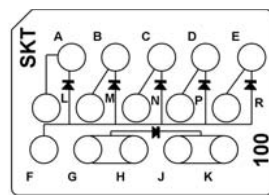
CTJ420E052
Three JANTX 1N5618 Diodes



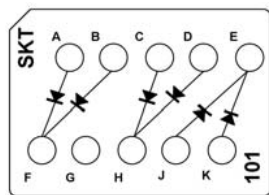
CTJ420E059
Four 150 Ω Resistors, 1/4 W



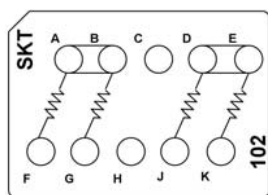
CTJ420E060
One JANTX 1N5618 Diode



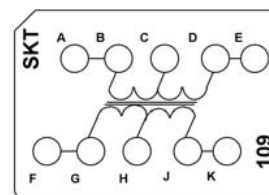
CTJ420E100
Six JANTX 1N5618 Diodes



CTJ420E101
Six JANTX 1N3613 Diodes



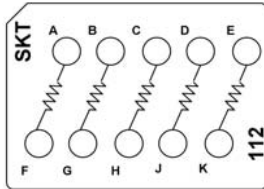
CTJ420E102
Two 20 kΩ Resistors, 1/4 W
Two 8.45 kΩ Resistors, 1/4 W



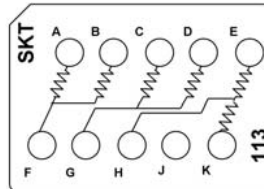
CTJ420E109
One MIL-T-27/172-45 Transformer



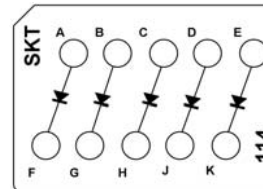
CTJ4 Circuit Configurations



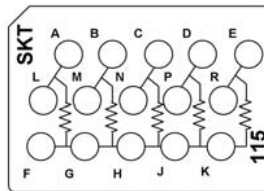
CTJ420E112
Five 150 Ω Resistors, 1/4 W



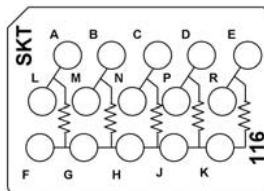
CTJ420E113
Six 4.7 kΩ Resistors, 1/4 W



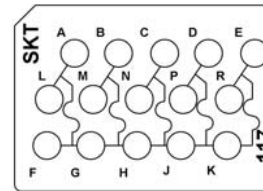
CTJ420E114
Five JANTX 1N4247 Diodes



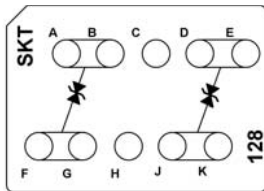
CTJ420E115
Five 6.2 kΩ Resistors, 1/4 W



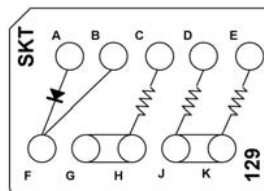
CTJ420E116
Five 3 kΩ Resistors, 1/4 W



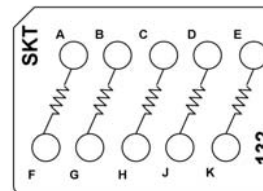
CTJ420E117
Five 5 A Fuses, 125 V



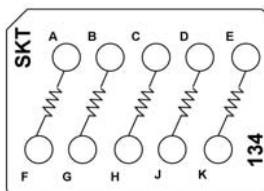
CTJ420E128
Two JANTX 1N6052A
Zener Diodes



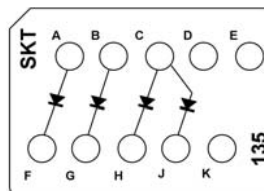
CTJ420E129
One JANTX 1N5618 Diode
Three 10 kΩ Resistors, 1/8 W



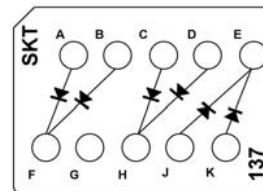
CTJ420E132
Five 150 Ω Resistors, 1/2 W



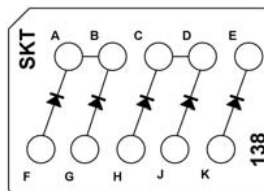
CTJ420E134
Three 150 Ω Resistors, 1/2 W
One 51 Ω Resistor, 1/2 W
One 820 Ω Resistor, 2 W



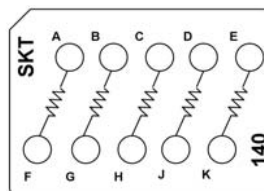
CTJ420E135
Four JANTX 1N5551 Diodes



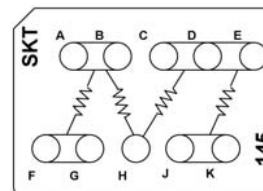
CTJ420E137
Six JANTX 1N6419-1 Diodes



CTJ420E138
Five JANTX 1N5618 Diodes



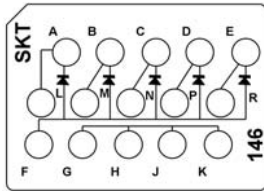
CTJ420E140
Five 5.1 kΩ Resistors, 1/10 W



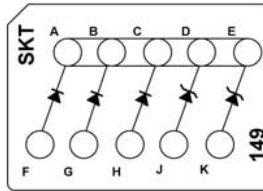
CTJ420E145
Two 100 kΩ Resistors, 1/4 W
Two 7.5 kΩ Resistors, 1/4 W



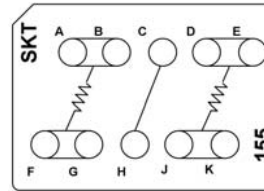
CTJ4 Circuit Configurations



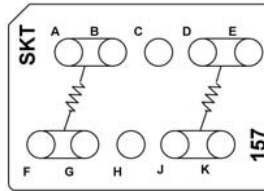
CTJ420E146
Five JANTX 1N5618 Diodes



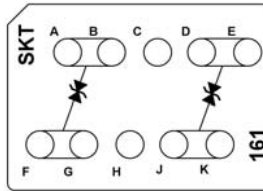
CTJ420E149
Three JANTX 1N5616 Diodes
Two JANTX 1N4461 Zener Diodes



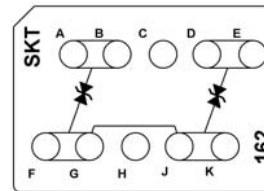
CTJ420E155
Two 1 kΩ Resistors, 1/4 W



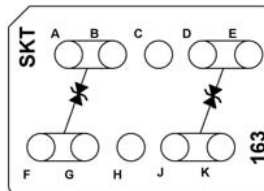
CTJ420E157
Two 120 Ω Resistors, 1/4 W



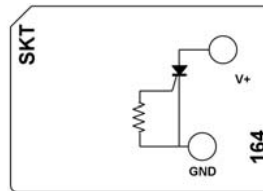
CTJ420E161
Two JANTX 1N6059A
Zener Diodes



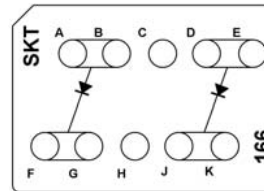
CTJ420E162
Two JANTX 1N6067A
Zener Diodes



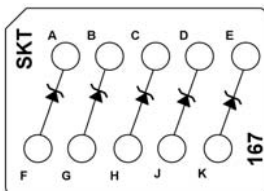
CTJ420E163
Two JANTX 1N6045A
Zener Diodes



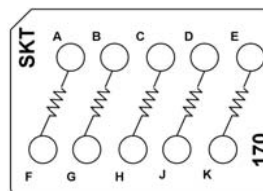
CTJ420E164
One JANTX 2N2323A SCR
One 1.1 kΩ Resistor, 1/10 W



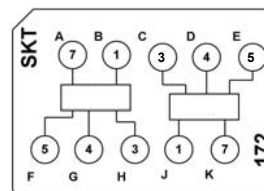
CTJ420E166
Two ON Semiconductor
MR756 Diodes



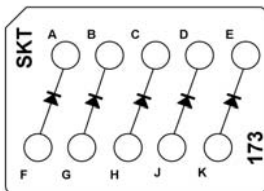
CTJ420E167
Five 1N5351B Zener Diodes



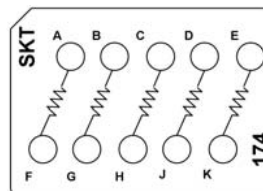
CTJ420E170
Five 249 Ω Resistors, 1/4 W



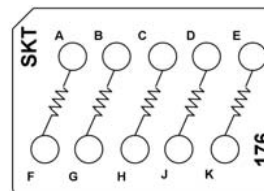
CTJ420E172
Two TELEDYNE M93F-1 ISO Cubes



CTJ420E173
Five JANTX 1N5418 Diodes



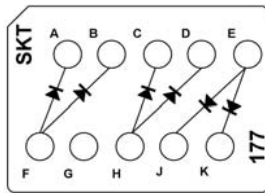
CTJ420E174
Five 100 kΩ Resistors, 1/10 W



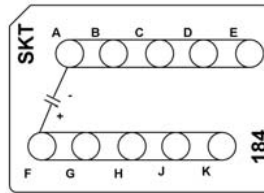
CTJ420E176
Five 470 Ω Resistors, 1/2 W



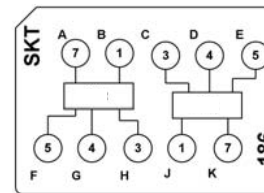
CTJ4 Circuit Configurations



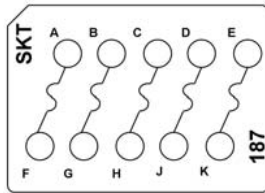
CTJ420E177
Six JANTX 1N4454-1 Diodes



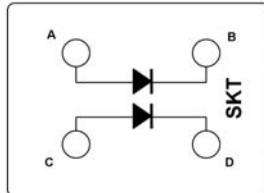
CTJ420E184
One 1µF Capacitor, 50 VDC



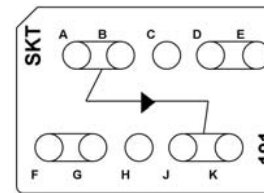
CTJ420E186
Two TELEDYNE M92F-3 ISO Cubes



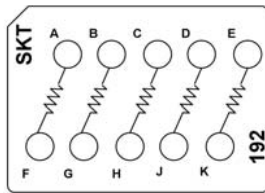
CTJ420E187
Five 7 A Fuses, 125 V



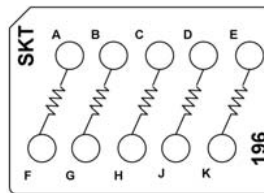
CTJ420E189
Two JANTX 1N5618 Diodes



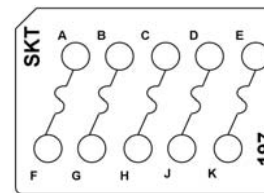
CTJ420E191
One INTERSIL HA-5002/883 Current Buffer



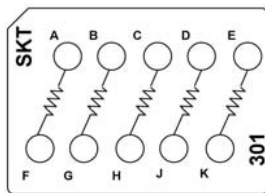
CTJ420E192
Five 1 kΩ Resistors, 1/4 W



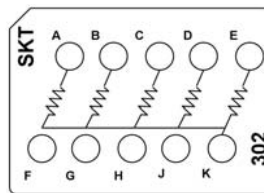
CTJ420E196
Five 127 Ω Resistors, 1/8 W



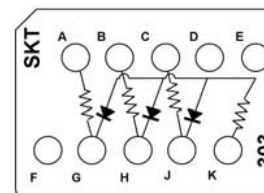
CTJ420E197
Five 5 A Fuses, 125 V



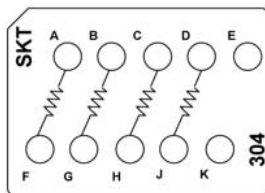
CTJ420E301
Four 2.7 kΩ Resistors, 1/4 W
One 56 Ω Resistor, 1/2 W



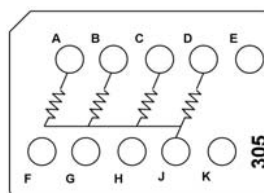
CTJ420E302
Four 2.7 kΩ Resistors, 1/4 W
One 3.9 kΩ Resistor, 1/4 W



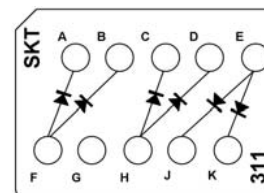
CTJ420E303
One 2.7 kΩ Resistor, 1/4 W
One 1.8 kΩ Resistor, 1/4 W
One 5.1 kΩ Resistor, 1/4 W
One 3.3 kΩ Resistor, 1/4 W
Three JANTX 1N5711 Diodes



CTJ420E304
Two 120 Ω Resistors, 1/2 W
Two 2.7 kΩ Resistors, 1/4 W



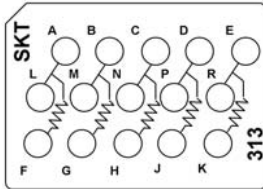
CTJ420E305
Two 2.7 kΩ Resistors, 1/4 W
Two 3.9 kΩ Resistors, 1/4 W



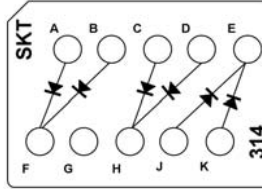
CTJ420E311
Six JANTX 1N649-1 Diodes



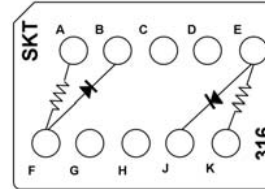
CTJ4 Circuit Configurations



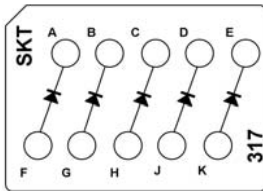
CTJ420E313
Five 100 kΩ Resistors, 1/4 W



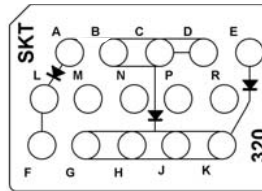
CTJ420E314
Six 1N4007 Diodes



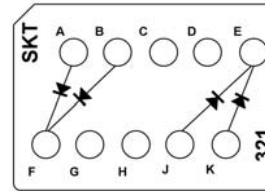
CTJ420E316
Two 1 kΩ Resistors, 1/2 W
Two 1N4007 Diodes



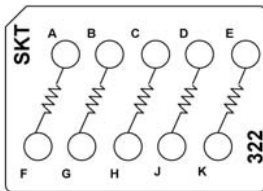
CTJ420E317
Five 1N4007 Diodes



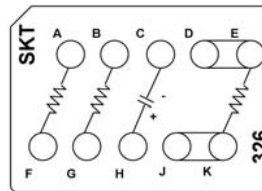
CTJ420E320
Three JANTX 1N5550 Diodes



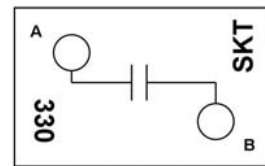
CTJ420E321
Four JANS 1N5811 Diodes



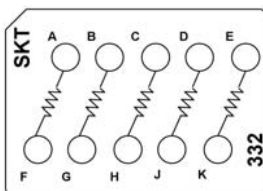
CTJ420E322
Five 4.7 kΩ Resistors, 1/2 W



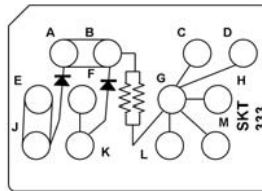
CTJ420E326
One 100 Ω Resistor, 1/4 W
One 300 Ω Resistor, 1/4 W
One 573 Ω Resistor, 1/4 W
One 10 μF Capacitor, 35 WVDC



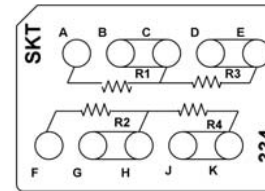
CTJ420E330
One 1000 pF Capacitor, 100 VDC



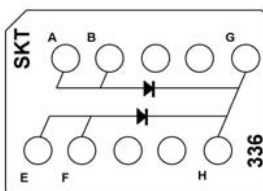
CTJ420E332
Five 10 kΩ Resistor, 1/10 W



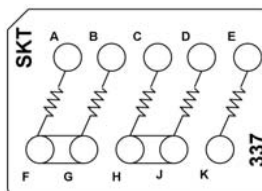
CTJ420E333
Two 2 kΩ Resistors, 1/4 W
Two JANTX 1N6677-1 Diodes



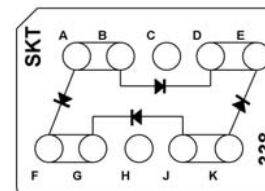
CTJ420E334
Two 10 kΩ Resistors, 1/8 W
Two 3 kΩ Resistors, 1/8 W



CTJ420E336
Two 200 A Diodes



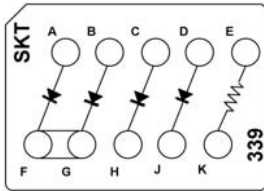
CTJ420E337
One 1 kΩ Resistor, 1/8 W
Three 10 kΩ Resistors, 1/8 W
One 300 kΩ Resistor, 1/8 W



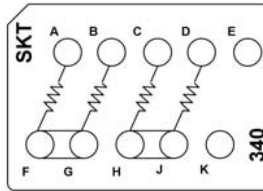
CTJ420E338
Four JANTX 1N3613 Diodes



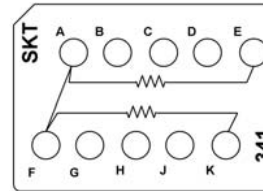
CTJ4 Circuit Configurations



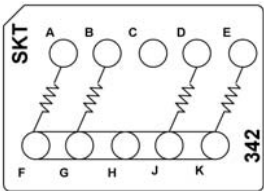
CTJ420E339
One 100 Ω Resistor, 1/2 W
Four JANTX 1N3613 Diodes



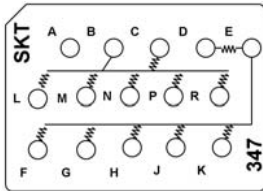
CTJ420E340
Two 2.2 kΩ Resistors, 1/2 W
Two 240 kΩ Resistors, 1/2 W



CTJ420E341
Two 470 kΩ Resistors, 2 W



CTJ420E342
Four 1.5 kΩ Resistors, 1 W



CTJ420E347
Twelve 4.99 kΩ Resistors, 1/8 W



DEUTSCH CTJ5 Series Board-Mount/Pluggable Modules

CONVENIENT

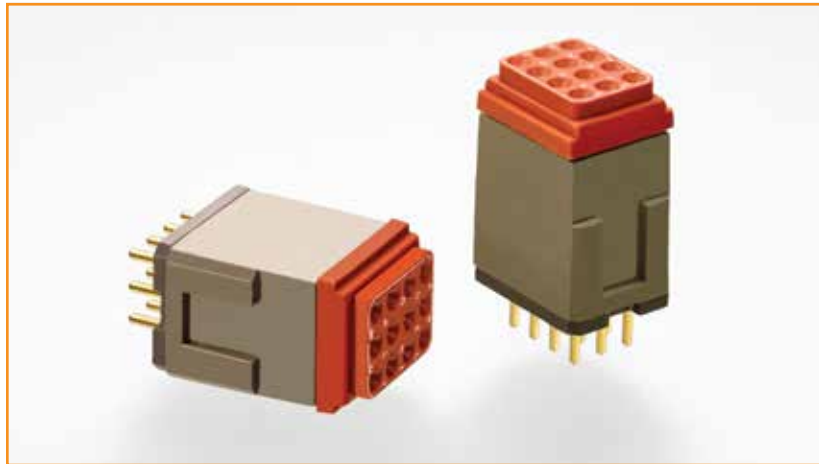
- Mounts on pc board or flat flex cable
- Uses AS39029 socket contacts to accept wiring and connect through to straight solder pin contacts
- Uses a standard insertion/removal tool
- Light weight

RUGGED

- Fluid resistant in most aerospace environments
- Available to operate in hydraulic fluid immersion

EASY TO USE

- Straight solder pin contacts allow modules to be soldered to pc boards or plugged into specialized components
- All contacts are discrete, mainly used to take single leads from a PC board out to wire



Fast, cost-effective termination of pc boards, flat flex cable, and electromechanical components.

Specifications

Dielectric Withstanding Voltage (AS81714 paragraph 3.5.6):

At Sea Level: 1500 VAC_{rms}
At 110,000 Ft: 200 VAC_{rms}

Insulation Resistance (AS81714 paragraph 3.5.11):

5000 MΩ min. at 25°C

Operating Temperature: -65°C to +200°C

Physical Shock: 78 g in each of the 3 mutually perpendicular planes

Vibration: Maintains continuity to minimize mechanical or physical damage during or after vibration following vibration levels

Level 1—34 minutes per axis

20-90 Hz at 6 dB/oct. rise

90-300 Hz at 1.0 g²/Hz

300-2000 Hz at 6 dB/oct. fall

Level 2—14 minutes per axis

20-40 Hz at 6 dB/oct. rise

40-350 Hz at 0.5 g²/Hz

350-2000 Hz at 6 dB/oct. fall

No discontinuities greater than 1 microsecond

Corrosion: 48 hours of salt spray

Magnetic Permeability: 2.0 μ max.

Fluid Resistance:

MIL-PRF-5606: Hydraulic fluid

MIL-DTL-83133: JP-8 aviation fuel

MIL-PRF-7808: Lubricating oil

MIL-PRF-23699: Lubricating oil

MIL-A-8243: Deicing/defrosting fluid

MIL-C-25769: Aircraft cleaning compound

MIL-PRF-87937: Aircraft cleaning compound

MIL-G-3056: Gasoline



Materials

Housing: Composite

Bus Bar/Pins: Copper alloy, plated gold

Pin Contacts: Gold over copper

Sealing Grommet: Elastomer, fluid resistant and environmentally sealed

Contact Resistance (at 25°C)
Meets AS39029 paragraph 3.5.4

Wire Size	Test Current	Voltage Drop
22 AWG	5 A	110 mV
20 AWG	7.5 A	83 mV
16 AWG	13 A	74 mV

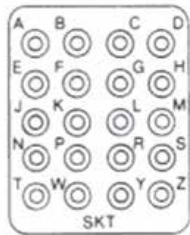
Usable Wire Size
Meets AS39029 paragraph 3.4.2

Contact	Wire Range (AWG)	Current Rating
Size 22	26-22	5 A
Size 20	24-20	7.5 A
Size 16	16-20	13 A

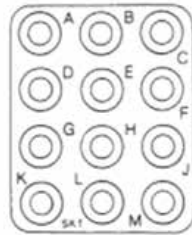
Grommet Sealing Range

Contact Size	Wire OD	
	Min.	Max.
22	0.030	0.060
20	0.040	0.083
16	0.065	0.109

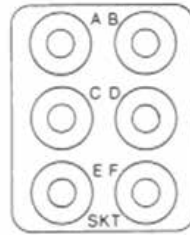
Modules



Size 22
20 Size 22 Contacts

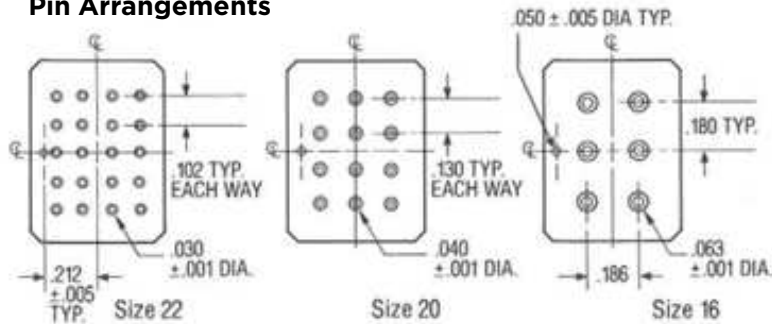


Size 20
12 Size 20 Contacts



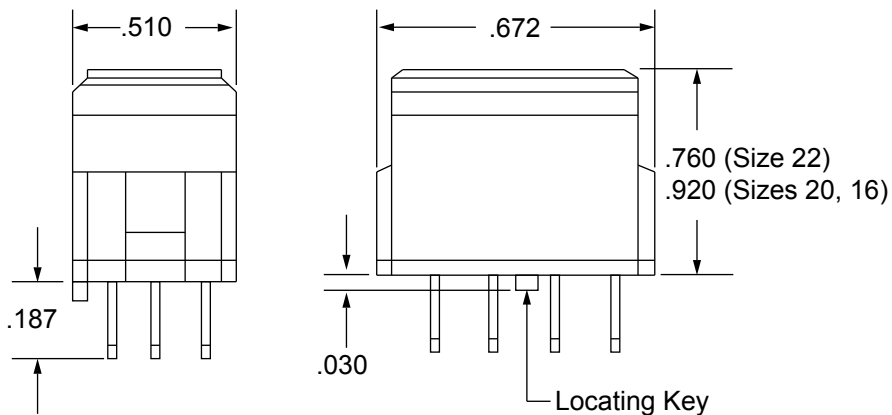
Size 16
6 Size 16 Contacts

Pin Arrangements

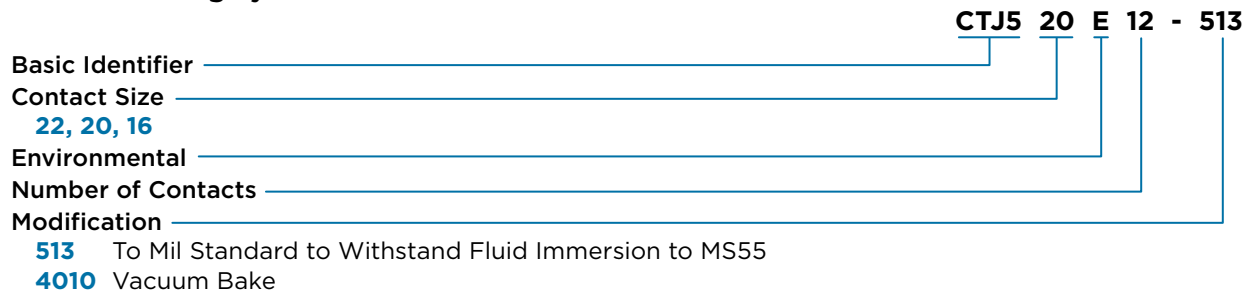




Outline Dimensions



Part Numbering System



Ordering Information

Module	Part No.
Size 22	CTJ522E20-xxx
Size 20	CTJ520E12-xxx
Size 16	CTJ516E6-xxx

xxx = modification code.



DEUTSCH CTJ6 and CTJ9 Series Plug and Receptacle Connectors

SAVE SPACE AND WEIGHT

- Small, lightweight modules
- Flange mounting or in-line mounting for simultaneous connect/disconnect of many wires

VERSATILE

- Flange or in-line mountable
- Backpack configurations available for receptacle connectors
- Available with optional strain relief
- PCB tail contacts or with crimp backpack

RELIABLE

- Cork in bottle interfacial seal between the mating halves
- Environmentally resistant

EASY MATING/UNMATING

- Audible click indicates proper mating
- Simple tool allows unmating



Small, lightweight modules designed for flange mounting or in-line mounting for simultaneous connect/disconnect of many wires.

Specifications

Dielectric Withstanding Voltage (AS81714 paragraph 3.5.6):

- At Sea Level: 1500 VAC_{rms}
- At 100,000 Ft: 200 VAC_{rms}

Insulation Resistance (AS81714 paragraph 3.5.11): 5000 M Ω min. at 25°C

Operating Temperature: -65°C to +200°C

Thermal Shock (AS81714 paragraph 3.5.5): After cycling the modules between -55°C and +200°C, they will meet all applicable electrical and mechanical requirements

Vibration: Maintains continuity to minimize mechanical or physical damage during or after vibration following vibration levels

Level 1—34 minutes per axis

- 20-90 Hz at 6 dB/oct. rise
- 90-300 Hz at 1.0 g²/Hz
- 300-2000 Hz at 6 dB/oct. fall

Level 2—14 minutes per axis

- 20-40 Hz at 6 dB/oct. rise
- 40-350 Hz at 0.5 g²/Hz
- 350-2000 Hz at 6 dB/oct. fall
- No discontinuities greater than 1 microsecond

Corrosion: No decrease in performance or exposure of base metal up to 48 hours of salt spray

Fluid Resistance:

- MIL-PRF-5606: Hydraulic fluid
- MIL-DTL-83133: JP-8 aviation fuel
- MIL-PRF-7808: Lubricating oil
- MIL-PRF-23699: Lubricating oil
- MIL-A-8243: Deicing/defrosting fluid
- MIL-C-25769: Aircraft cleaning compound
- MIL-PRF-87937: Aircraft cleaning compound
- MIL-G-3056: Gasoline



Materials

Housing: Composite

Bus Bar/Pins: Copper alloy, plated gold

Pin Contacts: Gold over copper

Sealing Grommet: Elastomer, fluid resistant and environmentally sealed

Strain Relief: Brass, nickel plated

Usable Wire Size

Meets AS39029 paragraph 3.4.2

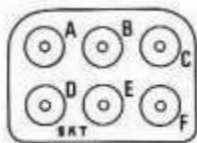
Contact	Wire Range (AWG)	Current Rating
Size 20	24-20	7.5 A
Size 12	14-12	23 A

Layout Arrangements

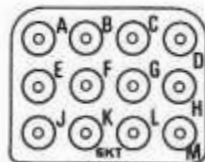
(Viewed from grommet side of plug module)



Layout 02
 2 Size 12 Contacts



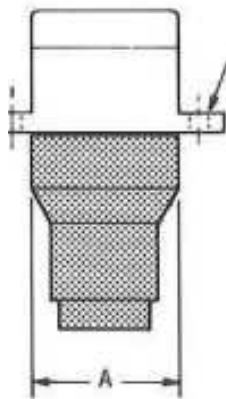
Layout 06
 6 Size 20 Contacts



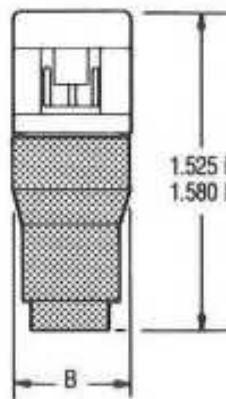
Layout 12
 12 Size 20 Contacts

CTJ9 Receptacle Configurations

(Shown with rear environmental assembly)



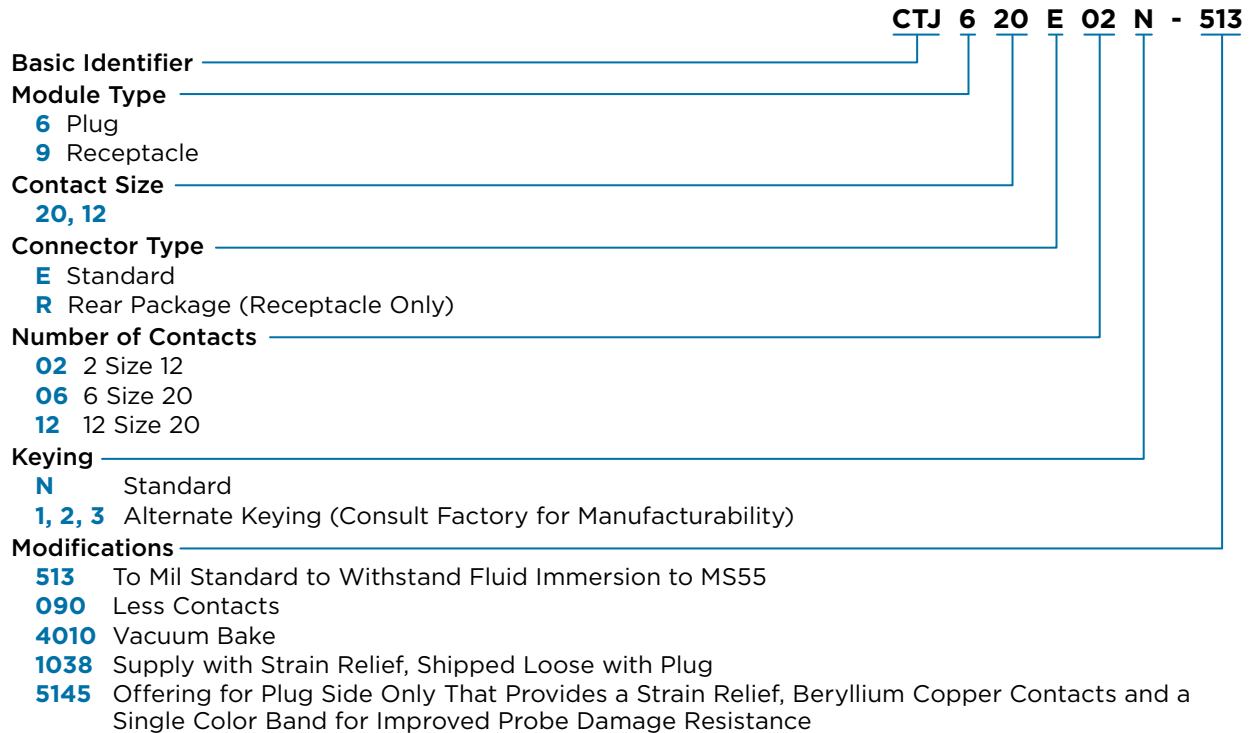
FLANGE SIZE
 SAME AS ON
 RECEPTACLE
 (BELOW)



1.525 MAX (Layout 06 & 12)
 1.580 MAX (Layout 02)

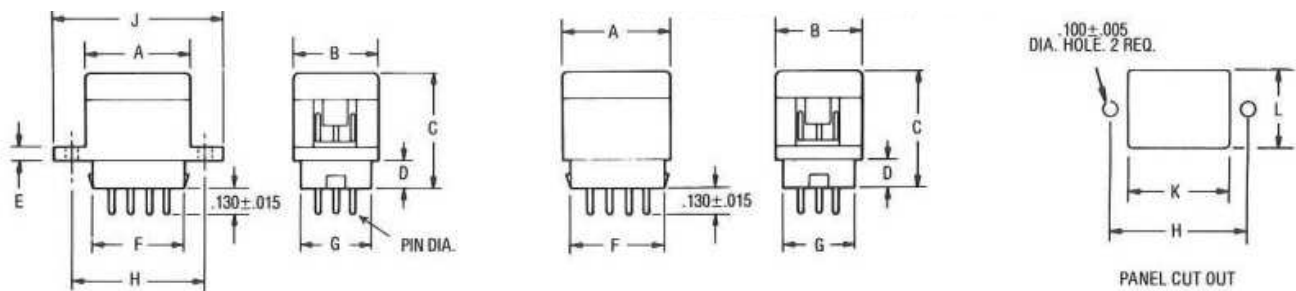


Part Numbering System



CTJ9 Receptacle Outline and Mounting Dimensions

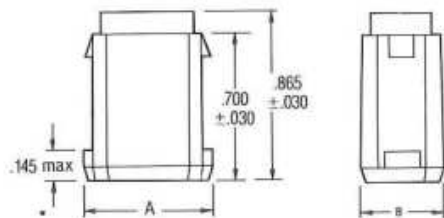
Flange Mount Receptacle In-Line Receptacle
 Order Part No. 65002*** for standard extended pins
 Order Part No. 65003*** for rear environmental assembly



Layout	A	B	C	D	E	F	G	H	J	K	L
02	0.770	0.620	0.750	0.200	0.100	0.670	0.510	1.000	1.300	0.750	0.530
06	0.650	0.470	0.750	0.200	0.100	0.550	0.380	1.000	1.180	0.600	0.380
12	0.770	0.620	0.750	0.200	0.100	0.670	0.510	1.000	1.300	0.750	0.530

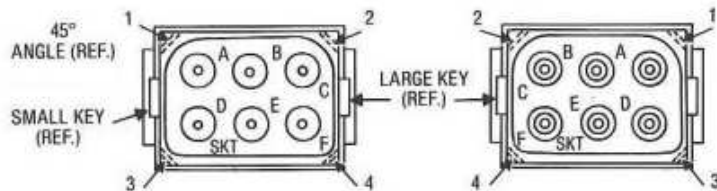


CTJ6 Plug Outline Dimensions



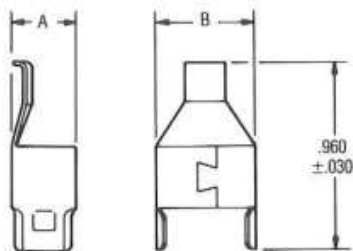
Layout	A	B	Part No.
02	0.652	0.510	CTJ612E02
06	0.530	0.360	CTJ620E06
12	0.652	0.510	CTJ620E12

Clocking Options



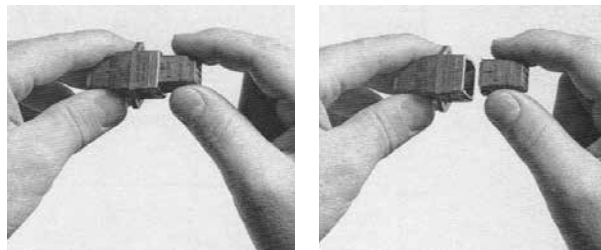
Keying Position	45° Angle Location
N	1, 2
1	3, 4
2	1, 3
3	2, 4

Strain Relief



Used with Layout	A	B	Part No.
06	0.320	0.490	1629-011-06117
12	0.470	0.630	1629-011-12117

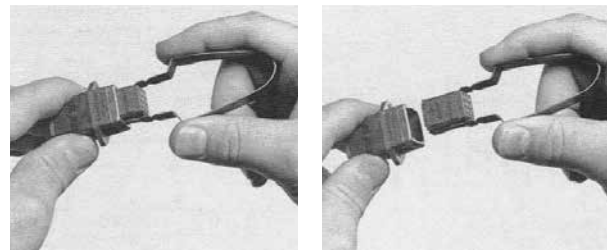
CTJ6/CTJ9 Mating Procedure



Step 1. With the plug's engaging surface facing the receptacle's mating face and the angled keying surfaces aligned, insert the plug into the receptacle.

Step 2. Press the plug and receptacle firmly together until you hear an audible click that indicates the plug is fully seated and locked in position.

CTJ6/CTJ9 Unmating Procedure



Step 1. Place extraction tool CTJ-R06 over the plug module and insert it into the slots on both sides of the receptacle. Push the tool in until the module's locking fingers disengage.

Step 2. Pressing the legs of the tool to hold the module tight, pull back to remove the plug module.