

8D Aluminum Series



Applications

High density connectors for all military and aeronautical purposes with severe vibration environment

Standards

MIL-C 38999 Series III - QPL approved
Pr EN 3645



Description

- High density connector from 1 to 128 contacts
- Sizes 22D, 20, 16, 12, # 16 coax and # 8 triax
- A quick screw coupling with anti-decoupling mechanism
- 100 % scoop proof
- An EMI/RFI reinforced shielding with grounding fingers

Characteristics

Mechanical

- Shell : aluminum alloy
- Plating :
 - olive green cadmium (W)
 - nickel (F)
- Insulator : thermoplastic or thermoset
- Grommet and seal : silicone elastomer
- Contact : copper alloy
- Plating : gold over nickel
- Endurance :
 - 500 mating/unmating operations
- Shock : high impact as per MIL-S 901
- Vibration :
 - sine 60 g with temperature cycling and simulated accessory (36 hours)
 - random :
 - 44.1 grms at high temperature
 - 49.5 grms at ambient temperature
- Contact retention (mini force in N) :
 - size 22 D : 45 N - size 20 : 67 N
 - size 16 : 111 N - size 12 : 111 N
 - size 8 : 111 N

Electrical

- Test voltage (Vrms)

Service	sea level	at 21000 m
M	1300	800
N	1000	600
I	1800	1000
II	2300	1000

- Contact resistance :
 - resistance of wire included in measurement :
 - size 22 D : 14.6 mΩ - size 16 : 3.8 mΩ
 - size 20 : 7.3 mΩ - size 12 : 1.7 mΩ
 - size 8 : 3 mΩ
- Insulation resistance : ≥ 5000 MΩ (at 500 Vdc)
- Contact rating :
 - size 22 D : 5 A - size 16 : 13 A
 - size 20 : 7.5 A - size 12 : 23 A
 - size 8 : 45 A
- Shell continuity : - olive green plating : 2.5 mΩ
- nickel plating : 1 mΩ
- Shielding : - 65 db to 10 GHz (F)
- 50 db to 10 GHz (W)
- 85 db to 1 GHz (F and W)
- Triaxial contact : # 8
 - bandwidth : 0 - 20 MHz
 - voltage rating : 500 Vac maxi.
125 Vac at 21000 m
 - voltage drop :
 - inner and middle contact ≤ 55 mV under 1A
 - outer contact ≤ 75 mV under 12A

Climatic

- Temperature range :
 - cadmium plating (W) -65°C +175°C
 - nickel plating (F) -65°C +200°C
- Sealing : mated connectors meet altitude immersion requirements of MIL-C 38999
- Salt spray to : MIL-STD 1344 method 1001
 - 500 hours (version W)
 - 48 hours (version F)
- Damp heat : MIL-C 38999 - 10 cycles (24 hours)

Resistance to fluids

- To MIL-C 38999 standard :
- Gasoline : JP5 (OTAN F44)
 - Mineral hydraulic fluid : MIL-H 5606 (OTAN H515)
 - Synthetic hydraulic fluid : skydrol 500 B4, LD4 (SAE AS 1241)
 - Mineral lubricating : MIL-L 7870A (OTAN 0142)
 - Synthetic lubricating : MIL-L 23699 (OTAN 0156), MIL-L 7808
 - Cleaning fluid : MIL-C 25769 diluted
 - De-icing fluid : MIL-A 8243
 - Extinguishing fluid : chlorobromethane
 - Cooling fluid : Coolanol

Ordering information

Part numbers

basic series	8 D 0 - 11 W 35 P N ***									
shell type	0 - square flange receptacle 7 - jam nut receptacle 5 - plug with RFI shielding									
designator	- - connectors with crimp contacts L - receptacle with long spill (male and female # 22D) C - receptacle with short spill (male and female # 22D - # 20 - # 16) S - receptacle with specific spill (male and female # 22D) W - receptacle with male contacts size 22D for wire wrap (3 wraps) T - receptacle with male contacts size 20 for wire wrap (2 wraps)									
shell size	09-11-13-15-17-19-21-23-25									
plating	W - olive green cadmium F - nickel									
contact layout	- see table p 120									
contact type	P - male A - male connector supplied less contact or with specific contacts S - female B - female connector supplied less contact or with specific contacts									
polarization	N- normal A-B-C-D-E - see table p 109 046 tinned straight spill									