GJB599 Series I Bayonet Circular Connectors (38999 Series I Type)

38999 Series I type · bayonet coupling · 127 insert arrangements



Coupling	Bayonet
Shell sizes	9 to 25
Insert arrangements	127
Contact sizes	22D to 10 (5–33 A)
Temperature	–65 to +200 °C
Mating cycles	500

Key features

- Bayonet coupling for fast mating and unmating
- Built to GJB 599A Series I, the Chinese counterpart of MIL-DTL-38999 Series I
- Removable crimp contacts (except hermetic), plus solder-cup and PCB contacts
- Receptacles for wall mounting, box mounting (front or rear), jam-nut and round-flange mounting
- Hermetic receptacles and bulkhead feed-through receptacles, leak rate ≤ 1×10^{-8} Pa·m³/s
- Interfacial seal and wire grommet; five key positions; accepts GJB 1784 backshells
- Fluorosilicone (oil-resistant) seals and thermocouple contacts on request
- Marine-environment (M) version in stainless steel or titanium for exposed marine locations

Specifications

Electrical

Parameter	Value	Condition
Dielectric withstanding voltage, service rating M	1300 Vrms / 800 Vrms	Sea level / 21,336 m altitude, mated
Dielectric withstanding voltage, service rating N	1000 Vrms / 600 Vrms	Sea level / 21,336 m altitude, mated
Dielectric withstanding voltage, service rating I	1800 Vrms / 1000 Vrms	Sea level / 21,336 m altitude, mated
Dielectric withstanding voltage, service rating II	2300 Vrms / 1000 Vrms	Sea level / 21,336 m altitude, mated
Insulation resistance	≥ 5000 MΩ	Room temperature
Insulation resistance	≥ 1000 MΩ / ≥ 200 MΩ	High temperature, non-hermetic / hermetic
Insulation resistance	≥ 100 MΩ	After humidity
Shell-to-shell conductivity	1–50 mΩ	Depends on finish — see finish table
EMI shielding	50 dB at 10 GHz	Aluminum shells

Mechanical		
Parameter	**Value**	**Condition**
Coupling	Bayonet	
Durability	500 mating cycles	
Shock	300 g, half-sine, 3 ms	

Environmental		
Parameter	**Value**	**Condition**
Operating temperature	–65 to +200 °C	–65 to +175 °C for cadmium finish
Sine vibration	10–2000 Hz, 30 g (100–2000 Hz), 3 × 4 h	
Random vibration	50–2000 Hz, 1 g^2/Hz (100–2000 Hz)	2 × 8 h non-hermetic; 2 × 4 h hermetic
Random vibration	25–2000 Hz, 5 g^2/Hz (100–300 Hz), 2 × 8 h	
Damp heat, cyclic	10 cycles × 24 h	GJB 1217, method 1002, type II
Hermetic receptacle leak rate	≤ 1 × 10^{-8} Pa·m^3/s	0.1 MPa pressure differential
Operating altitude	≤ 30,480 m	
Mold resistance	Grade 2, 28 days	GJB 150

Versions

Series code	Version	Notes
JY27467T	Plug	-U suffix for the reverse-side plug used with feed-through receptacles
JY27466T	Wall-mount square-flange receptacle, front mounting	
JY27656T	Wall-mount square-flange receptacle, rear mounting	
JY27496E	Box-mount square-flange receptacle, front mounting	
JY27505E	Box-mount square-flange receptacle, rear mounting	
JY27468T	Jam-nut receptacle	
JY27901T	Round-flange adapter receptacle	
JY27469Y / 27470Y / 27471Y	Hermetic receptacles: wall mount / jam nut / solder mount	
JY27468Y, JY27466Y ...C	Hermetic bulkhead feed-through receptacles	Mate with a standard plug on one side and a -U plug on the other
JY27...M	Marine-environment version (M)	Stainless (E) or titanium (TA) shells for exposed decks and harsh semi-sealed areas; rated for acid salt spray, acid atmosphere and mold. Example: JY27467T17MTA35PN.

Shell materials and finishes

Code	Shell material	Finish	Shell conductivity	EMI shielding	Temperature	Salt spray
F	Aluminum alloy	Electroless nickel	1 mΩ	50 dB at 10 GHz	−65 to +200 °C	48 h
B	Aluminum alloy	Olive-drab cadmium	2.5 mΩ	50 dB at 10 GHz	−65 to +175 °C	500 h
E, K1	Stainless steel	Passivated	50 mΩ	—	−65 to +200 °C	500 h
N	Stainless steel (hermetic)	Nickel	1 mΩ	—	−65 to +200 °C	48 h
TA	Titanium alloy	None (bare titanium)	10 mΩ	65 dB at 10 GHz	−65 to +200 °C	Acid salt spray rated (marine version)

Contact sizes and current ratings

Contact size	Engaging diameter	Contact resistance	Contact resistance (hermetic)	Current rating	Wire size
22D	0.76 mm	≤ 14.6 mΩ	≤ 28 mΩ	5 A	AWG 22–26 (0.13–0.33 mm²)
22	0.76 mm	Tested to your requirements	—	5 A	AWG 22–26
20	1.02 mm	≤ 7.3 mΩ	≤ 12.0 mΩ	7.5 A	AWG 20–24 (0.20–0.52 mm²)
16	1.58 mm	≤ 3.7 mΩ	≤ 8.5 mΩ	13 A	AWG 16–20 (0.52–1.31 mm²)
12	2.41 mm	≤ 1.83 mΩ	≤ 5 mΩ	23 A	AWG 12–14 (2.08–3.31 mm²)
10	3.20 mm	≤ 1 mΩ	—	33 A	AWG 10 (5.26 mm²)
8 twinax	—	Tested to your requirements	—	Signal (twinax)	Twinax cable to your requirements

How to order

JY [type] [class] [shell] [finish] [arrangement] [contact] [key] [suffix]

Example: **JY27505E15F35SN** — Box-mount rear-mounting receptacle, no backshell thread, shell 15, aluminum with nickel, arrangement 15-35, crimp socket contacts, key N

Code segment	Options
Type	**27467** Plug
Type	**27466 / 27656** Wall-mount square-flange receptacle, front / rear mounting
Type	**27496 / 27505** Box-mount square-flange receptacle, front / rear mounting
Type	**27468** Jam-nut receptacle
Type	**27901** Round-flange adapter receptacle
Type	**27469 / 27470 / 27471** Hermetic receptacle: wall mount / jam nut / solder mount
Class	**T** Rear thread for backshells

Code segment	Options
Class	**E** No rear thread (box-mount receptacles)
Class	**Y** Hermetic
Shell	**09 – 25** 9, 11, 13, 15, 17, 19, 21, 23, 25
Finish	**F / B** Aluminum — electroless nickel / olive-drab cadmium
Finish	**E, K1 / W1** Stainless steel — passivated / cadmium
Finish	**N / E** Hermetic — nickel / electropolished
Arrangement	**e.g. 35** See the insert arrangement table below
Contact	**P / S** Pin / socket
Contact	**PC, PL / SC, SL** PCB pin / socket, short or long tail
Contact	**C** Feed-through pin (hermetic feed-through)
Key	**N** Normal
Key	**A B C D** Alternate (shell 9: N, A, D only)
Suffix	**H** Solder-cup contacts
Suffix	**V** Fluorosilicone seals (oil resistant)
Suffix	**-U** Reverse-side plug for feed-through receptacles
Suffix	**Rn** n pairs of thermocouple contacts (chromel / alumel)

Hermetic receptacles do not use layouts with coax, shielded or twinax contacts.

Protective caps JY27501 (plug) and JY27502 (receptacle) are ordered separately.

Insert arrangements

Arrangement	Contacts	Contact sizes	Service rating
9-03	3	3 × size 20	I
9-35	6	6 × size 22D	M
9-44	4	4 × size 22	M
9-98	3	3 × size 20	I
11-02	2	2 × size 16	I
11-04	4	4 × size 20	I
11-05	5	5 × size 20	I
11-08a	8	4 × size 20, 4 × size 22D	M
11-35	13	13 × size 22D	M
11-98	6	6 × size 20	I
11-99	7	7 × size 20	I
13-03	3	3 × size 16	II
13-04	4	4 × size 16	I
13-06	6	2 × size 12, 4 × size 20	M
13-06A	6	2 × size 16, 4 × size 20	M
13-08	8	8 × size 20	I

Arrangement	Contacts	Contact sizes	Service rating
13-08A	8	4 × size 16, 4 × size 20	M
13-12	12	1 × size 12 coax, 11 × size 22D	M
13-12A	12	12 × size 20	N
13-16	16	3 × size 16, 13 × size 22D	N
13-35	22	22 × size 22D	M
13-98	10	10 × size 20	I
15-03	3	2 × size 12, 1 × size 16	I
15-04A	4	4 × size 12	M
15-4B	4	4 × size 12 coax	N
15-05	5	5 × size 16	II
15-06A	6	6 × size 16	M
15-13	13	4 × size 16, 2 × size 20, 7 × size 22D	M
15-14	14	6 × size 16, 8 × size 22D	N
15-15	15	1 × size 16, 14 × size 20	I
15-18	18	18 × size 20	I
15-19	19	19 × size 20	I
15-23	23	3 × size 16, 2 × size 20, 18 × size 22D	M
15-32	32	9 × size 20, 23 × size 22D	M
15-35	37	37 × size 22D	M
15-97	12	4 × size 16, 8 × size 20	I
17-02	39	1 × size 8 twinax, 38 × size 22D	M
17-06	6	6 × size 12	I
17-06C	6	4 × size 12, 2 × size 22	I
17-08	8	8 × size 16	II
17-14	14	2 × size 12, 4 × size 16, 8 × size 20	M
17-15	15	5 × size 12 coax, 10 × size 22D	M
17-19	19	4 × size 16, 11 × size 20, 4 × size 22D	M
17-20	20	4 × size 12, 16 × size 22D	M
17-26	26	26 × size 20	I
17-28A	28	3 × size 12, 25 × size 22D	M
17-30	6	3 × size 10, 3 × size 20	N
17-35	55	55 × size 22D	M
17-42	42	42 × size 22	M
17-75	2	2 × size 8 twinax	N
17-99	23	2 × size 16, 21 × size 20	I
19-06A	6	3 × size 12 coax, 3 × size 16	N
19-11	11	11 × size 16	II

Arrangement	Contacts	Contact sizes	Service rating
19-13	13	8 × size 12, 5 × size 20	I
19-17	17	2 × size 12, 15 × size 20	M
19-18	18	4 × size 8 twinax, 14 × size 22D	M
19-18A	18	4 × size 12 coax, 14 × size 22D	M
19-20	20	8 × size 16, 4 × size 20, 8 × size 22D	M
19-22	22	7 × size 12, 15 × size 22D	M
19-28	28	2 × size 16, 26 × size 20	I
19-30	30	1 × size 16, 29 × size 20	I
19-32	32	32 × size 20	I
19-35	66	66 × size 22D	M
19-45	67	67 × size 22D	M
19-53	53	53 × size 22	M
19-82	8	8 × size 12 coax	I
19-96	9	9 × size 12	I
21-10A	10	10 × size 12 coax	II
21-11	11	11 × size 12	I
21-13	13	2 × size 10, 7 × size 12, 4 × size 20	M
21-16	16	16 × size 16	II
21-24	24	24 × size 20	I
21-25	25	25 × size 20	I
21-27	27	27 × size 20	I
21-28	28	3 × size 10, 25 × size 22D	I
21-35	79	79 × size 22D	M
21-35A	68	2 × size 12 coax, 66 × size 22D	M
21-39	39	2 × size 16, 37 × size 20	I
21-39A	39	2 × size 8 twinax, 4 × size 16, 33 × size 22D	M
21-41	41	41 × size 20	I
21-61	61	6 × size 16, 55 × size 22D	M
21-75	4	4 × size 8 twinax	N
21-75A	4	4 × size 12	I
23-02	85	85 × size 22	M
23-06H	6	6 × size 10	II
23-14	14	14 × size 12	I
23-21	21	21 × size 16	II
23-26	26	8 × size 12, 18 × size 20	M
23-32	32	32 × size 20	I
23-34	34	34 × size 20	I

Arrangement	Contacts	Contact sizes	Service rating
23-34A	34	4 × size 12, 16 × size 16, 14 × size 22D	M
23-35	100	100 × size 22D	M
23-36	36	36 × size 20	I
23-44a	44	2 × size 10, 4 × size 12, 38 × size 22D	M
23-53	53	53 × size 20	I
23-55	55	55 × size 20	I
23-70	70	10 × size 20, 60 × size 22D	M
23-72	72	2 × size 8 twinax, 70 × size 22D	M
23-86	86	16 × size 20, 70 × size 22D	M
23-97	16	16 × size 16	I
23-99	11	11 × size 16	II
25-02	100	100 × size 22	M
25-04	56	8 × size 16, 48 × size 20	I
25-07	99	2 × size 8 twinax, 97 × size 22D	M
25-08	8	8 × size 8 twinax	N
25-10	10	6 × size 10, 4 × size 12	N
25-11	11	9 × size 10, 2 × size 20	N
25-19	19	19 × size 12	I
25-20	30	3 × size 8 twinax, 1 × size 12 coax, 3 × size 12 shielded, 13 × size 16, 10 × size 20	N
25-24	24	12 × size 12, 12 × size 16	I
25-29	29	29 × size 16	I
25-31	31	2 × size 8 twinax, 5 × size 10, 12 × size 16, 12 × size 20	M
25-32	32	6 × size 10, 10 × size 16, 16 × size 20	M
25-35	128	128 × size 22D	M
25-35A	35	11 × size 12 coax, 24 × size 20	M
25-36	36	2 × size 8 twinax, 4 × size 10, 8 × size 16, 22 × size 20	N
25-39	39	2 × size 12, 17 × size 16, 20 × size 20	M
25-43	43	20 × size 16, 23 × size 20	I
25-45	45	8 × size 12, 37 × size 20	M
25-46	46	2 × size 8 twinax, 4 × size 16, 40 × size 20	I
25-61	61	61 × size 20	I
25-64a	64	8 × size 16, 40 × size 20, 16 × size 22D	M
25-69	69	10 × size 16, 15 × size 20, 44 × size 22D	M
25-92	92	4 × size 20, 88 × size 22D	M
25-93	118	8 × size 16, 110 × size 22D	M
25-94	94	4 × size 12 coax, 8 × size 16, 82 × size 22D	M

Arrangement	Contacts	Contact sizes	Service rating
25-118G	118	8 × size 16, 110 × size 22D	N

Standards

- **GJB 599A Series I** — Chinese specification for Series I bayonet circular connectors, the counterpart of MIL-DTL-38999 Series I.

Request a quote or drawing: https://sinoxh.com/request-a-quote/?product=GJB599%20Series%20I