SHV SERIES
High Voltage Connectors

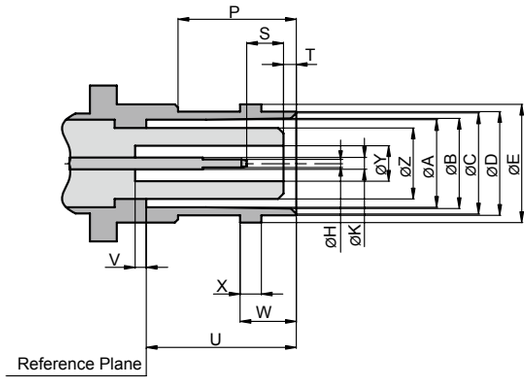
FEATURES

SHV connectors are suitable for all high voltage applications up to 3.5KV RMS, in particular for use on nuclear instruments.

The SHV outer contact ground connection is maintained through the center contact mating cycle. The center contacts are recessed to prevent shock hazards when the connectors are unmated.

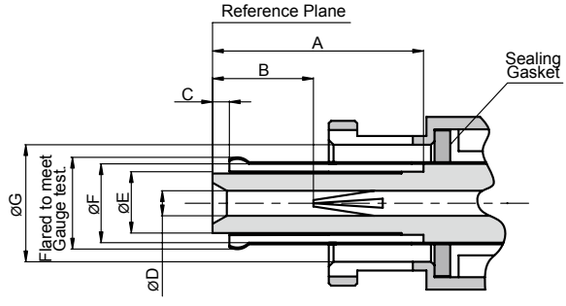
INTERFACE MATING DIMENSIONS

JACK:



Letter	Millimeters (inch)	
	Minimum	Maximum
A	8.10(.319)	8.15(.321)
B	8.33(.328)	8.46(.333)
C	8.81(.347)	9.07(.357)
D	9.60(.378)	9.70(.382)
E	10.97(.432)	11.07(.436)
H	1.32(.052)	1.37(.054)
K	2.06(.081)	2.11(.083)
P	10.85(.427)	–
S	4.78(.188)	5.28(.208)
T	1.55(.061)	1.98(.078)
U	15.90(.626)	16.00(.630)
V	1.63(.064)	2.18(.086)
W	5.18(.204)	5.28(.208)
X	1.90(.075)	2.06(.081)
Y	4.83(.190)	4.98(.196)
Z	–	6.60(.260)

PLUG:



Letter	Millimeters (inch)	
	Minimum	Maximum
A	15.95(.628)	16.05(.632)
B	6.05(.238)	6.65(.262)
C	1.17(.046)	1.63(.064)
D	2.08(.082)	–
E	4.57(.180)	4.72(.186)
F	6.71(.264)	–
G	9.78(.385)	9.91(.390)

Note: Mesa's SHV connectors meet the interface requirements of MIL-STD-348A

TECHNICAL DATA

Electrical Data	
Dielectric Withstanding Voltage (at sea level, in V rms, 50 Hz)	5000
Working Voltage (at sea level, in V rms, 50 Hz)	≤3500
Corona Extinction Voltage (at 21000m, in V rms, 50 Hz)	≥350
Impedance	50Ω
Frequency Range	DC up to 300 MHz
Insulation Resistance	≥5000MΩ
Contact Resistance Inner conductor	≤2mΩ
Contact Resistance Outer conductor	≤1.5mΩ
Current Rating, continuous	≤10A

Mechanical Data	
Coupling Nut Torque	0.6 to 2.5 in.-lbs
Coupling Nut Retention Force	≥101.2 lbs
Contact Captivation	≥6.1 lbs
Durability (matings)	≥500

Environmental Data	
Temperature Range	-65°C…+165°C
Thermal Shock	MIL-STD-202,Method 107,Condition B
Moisture Resistance	MIL-STD-202,Method 103,Condition B
Corrosion	MIL-STD-202, Method 101, Condition B

VSWR

Frequency Range: DC~300MHz

VSWR: DC~100MHz ≤ 1.1

DC 100~300MHz ≤ 1.20

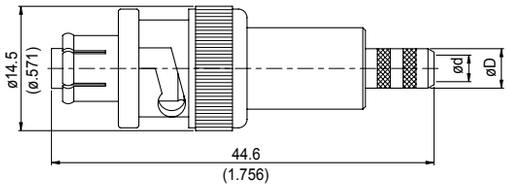


Figure 1

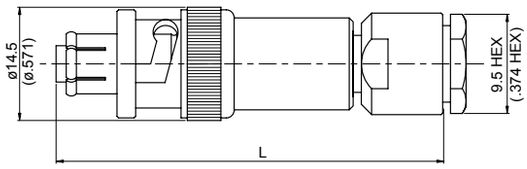


Figure 2

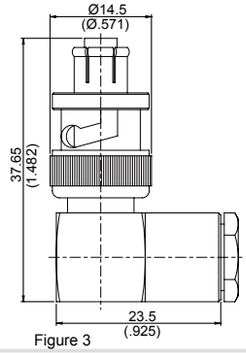


Figure 3

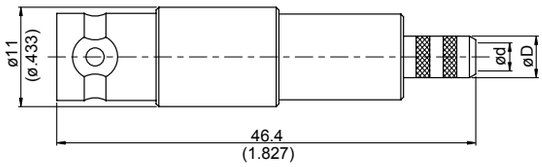


Figure 4

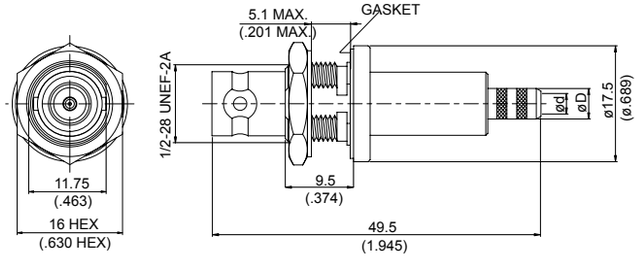


Figure 5

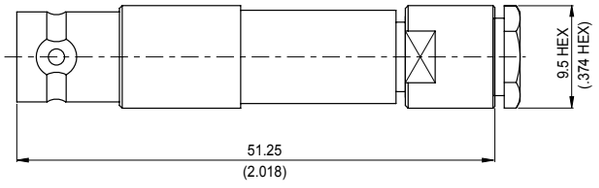


Figure 6

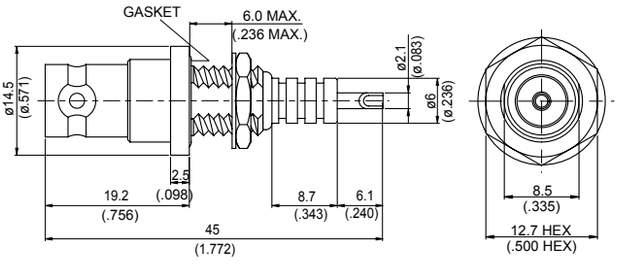


Figure 7

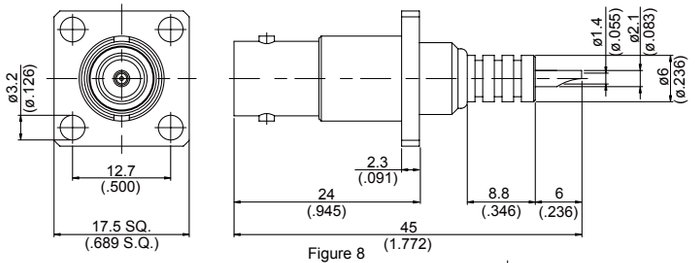
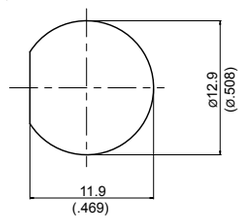
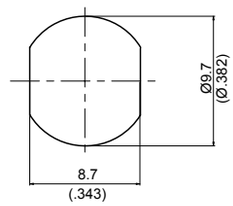


Figure 8

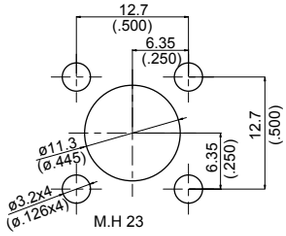
PART NUMBER	Fig.	Measuments	M.H	Weight	Material	Suitable Cable	Remarks
SHV PLUG CRIMP							
MMCSHCP-058	1	ød=3.1(.122) øD=4.4(.173)		14.52g	C11	RG58,M195	
MMCSHCP-059	1	ød=3.9(.154) øD=5.6(.220)		15.23g	C11	RG59	
MMCSHCP-142	1	ød=3.1(.122) øD=4.4(.173)		14.22g	C11	RG55,RG142,RG142-E,RG400	
MMCSHCP-223	1	ød=3.1(.122) øD=4.4(.173)		14.22g	C11	RG223	
SHV PLUG CLAMP							
MMCSHCLP-058	2	L=44.8(1.764)		22.98g	C11	RG55,RG58,RG142,RG142-E,RG223,RG400, M195	
MMCSHCLP-059	2	L=44.6(1.756)		22.93g	C11	RG59	
SHV PLUG CLAMP RIGHT ANGLE							
MMCSHRACLP-058	3				C11	RG55,RG58,RG142,RG142-E,RG223,RG400, M195	
MMCSHRACLP-059	3			31.05g	C11	RG59	
SHV JACK CRIMP							
MMCSHCJ-058	4	ød=3.1 (.122) øD=4.4 (.173)		25.74g	A2	RG58, M195	
MMCSHCJ-059	4	ød=3.9 (.154) øD=5.6 (.220)			A2	RG59	
MMCSHCJ-142	4	ød=3.1 (.122) øD=4.4 (.173)			A2	RG55,RG142,RG142-E,RG400	
MMCSHCJ-223	4	ød=3.1 (.122) øD=4.4 (.173)			A2	RG223	
SHV JACK CRIMP FOR BULKHEAD							
MMCSHBHCJ-058	5	ød=3.1 (.122) øD=4.4 (.173)	5	25.63g	A2	RG58, M195	With Gasket
MMCSHBHCJ-059	5	ød=3.9 (.154) øD=5.6 (.220)	5	25.94g	A2	RG59	With Gasket
MMCSHBHCJ-142	5	ød=3.1 (.122) øD=4.4 (.173)	5	24.95g	A2	RG55,RG142,RG142-E,RG400	With Gasket
MMCSHBHCJ-223	5	ød=3.1 (.122) øD=4.4 (.173)	5		A2	RG223	With Gasket
SHV JACK CLAMP							
MMCSHCLJ-058	6			22.37g	A2	RG55,RG58,RG142,RG142-E,RG400, M195,RG223	
MMCSHCLJ-059	6				A2	RG59	
SHV JACK FOR BULKHEAD							
MMCSHBHJ	7		7D	11.55g	A2		With Gasket
SHV JACK FOR PANEL RECEPTACLE							
MMCSHPRJ	8		23	14.78g	A2		No Gasket



M.H 5



M.H 7D



M.H 23