

MHV SERIES High Voltage Connectors

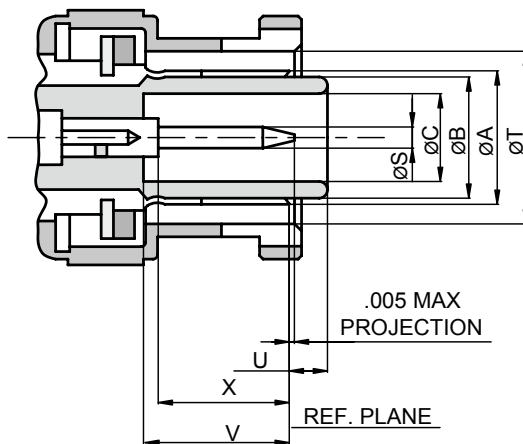
FEATURES

MHV series connectors are similar in design to BNC connectors, but have insulators with an elongated overlap. The insulators protrude over the outer contacts to give a certain degree of shock-protection when not mated.

MHV connectors are sometimes referred to as high voltage BNC, but are not intermatable with BNC connectors. MHV connectors are covered under MIL-C-39012.

INTERFACE MATING DIMENSIONS

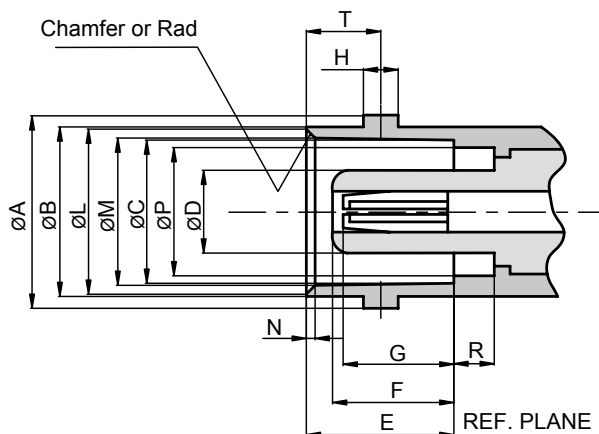
PLUG:



Letter	Millimeters (inch)	
	Minimum	Maximum
A	Gauge Test	Gauge Test
B	7.06(.278)	7.16(.282)
C	4.83(.190)	4.93(.194)
S	1.32(.052)	1.37(.054)
T	9.78(.385)	9.91(.390)
U	–	2.18(.086)
V	7.67(.302)	–
X	7.62(.300)	–

MHV

JACK:



Letter	Millimeters (inch)	
	Minimum	Maximum
A	10.97(.432)	11.07(.436)
B	9.60(.378)	9.70(.382)
C	8.10(.319)	8.15(.321)
D	–	4.72(.186)
E	8.31(.327)	8.51(.335)
F	7.34(.289)	7.90(.311)
G	6.43(.253)	7.11(.280)
H	1.91(.075)	2.06(.081)
L	8.79(.346)	9.04(.356)
M	8.31(.327)	8.46(.333)
N	0.38(.015)	0.76(.030)
P	7.21(.284)	7.37(.290)
R	2.18(.086)	–
T	4.19(.165)	4.29(.169)

Note: Mesa's MHV 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)	≤1600
Corona Extinction Voltage (at 21000m, in V rms, 50 Hz)	≥300
Impedance	50Ω
Frequency Range	DC up to 300 MHz
Insulation Resistance	≥5000MΩ
Contact Resistance Inner conductor	≤2mΩ
Contact Resistance Outer conductor	≤1mΩ
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 106
Corrosion	MIL-STD-202, Method 101 Condition B

VSWR

Frequency Range: DC~300MHz

VSWR: DC~100MHz ≤ 1.1

DC 100~300MHz ≤ 1.20

MHV

MESA MICROWAVE

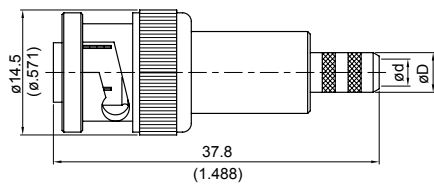


Figure 1

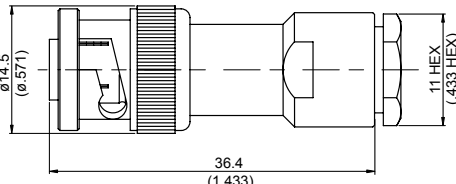


Figure 2

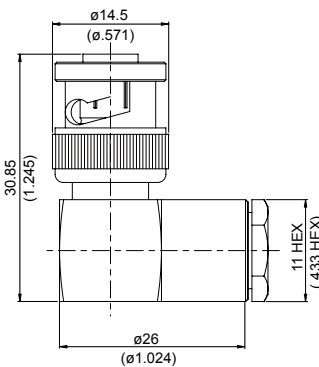


Figure 3

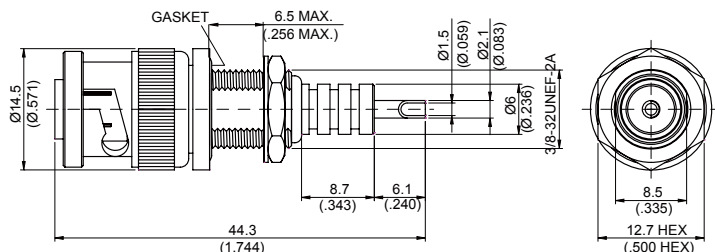


Figure 4

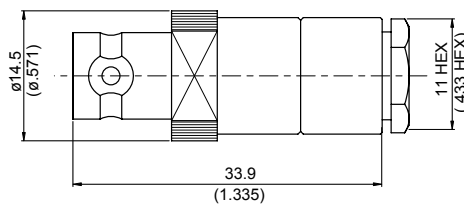


Figure 5

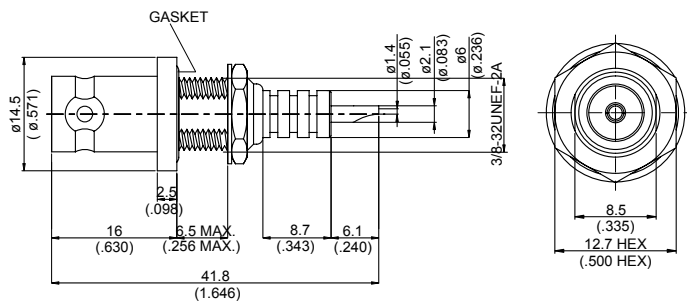


Figure 6

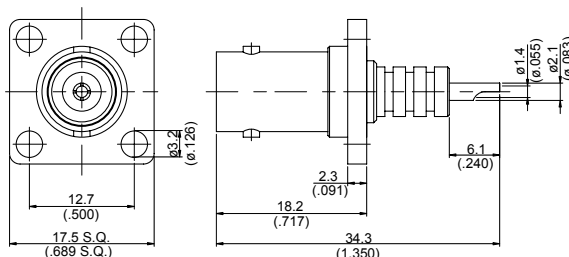


Figure 7

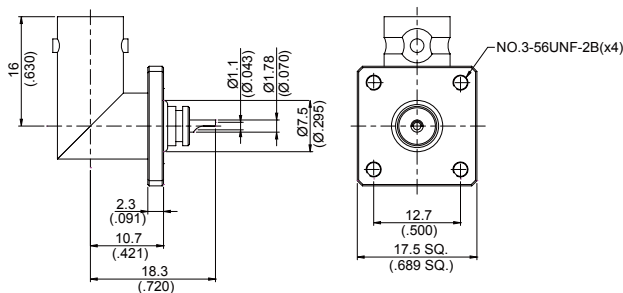
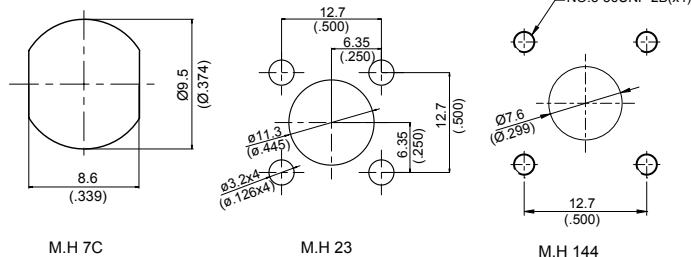


Figure 8



M.H 7C

M.H 23

M.H 144

MHV

PART NUMBER	Fig.	Measments	M.H	Weight	Material	Suitable Cable	Remarks
MHV PLUG CRIMP							
MMCVCPL-058	1	ød=3.1(.122) øD=4.4(.173)		13.26g	A11	RG58,M195	
MMCVCPL-059	1	ød=3.9(.154) øD=5.6(.220)			A11	RG59	75Ω Impedance
MMCVCPL-142	1	ød=3.1(.122) øD=4.4(.173)		13.02g	A11	RG55,RG142,RG142-E,RG400	
MMCVCPL-223	1	ød=3.1(.122) øD=4.4(.173)		13.02g	A11	RG223	
MHV PLUG CLAMP							
MMCVCPL-058	2			20.46g	A11	RG55,RG58,RG142,RG142-E,RG223,RG400, M195	
MMCVCPL-059	2			19.63g	A11	RG59	75Ω Impedance
MHV PLUG CLAMP RIGHT ANGLE							
MMCVRACL-058	3			29.46g	A11	RG55,RG58,RG142,RG142-E,RG223,RG400, M195	
MHV PLUG FOR BULKHEAD							
MMCVBHP	4		7C		A11		With Gasket
MHV JACK CLAMP							
MMCVCPL-058	5			20.13g	C2	RG55,RG58,RG142,RG142-E,RG223,RG400,M195	
MMCVCPL-059	5				C2	RG59	75Ω Impedance
MHV JACK FOR BULKHEAD							
MMCVBHJ	6		7C	11.36g	C2		With Gasket
MHV JACK FOR PANEL RECEPTACLE							
MMCVPRJ-A	7		23	10.67g	C2		No Gasket
MHV JACK FOR PANEL RECEPTACLE RIGHT ANGLE							
MMCVRAPRJ	8		144		B1		