

# 75 $\Omega$ D38999 Circular RF Cable Assemblies

## Features & Benefits

- Interfaces modified for true 75 Ohm impedance through both cable and connector
- Fits into common D38999 housings
- Contacts available for standard cavity sizes 8, 12 and 16

## Applications

- 3G-SDI - high speed video applications that require superior shielding
- Ruggedized I/O video connections for military applications
- High definition camera links for UAV platforms



## When to Use 75 Ohm RF Cable Assemblies

High performance true 75 Ohm video connections are critical when high definition video feeds from camera to receivers are needed. Unlike many video cables which use 75 Ohm cables and standard 50 Ohm connectors, SV's D38999 contacts have a true 75 Ohm impedance construction thus assuring a high fidelity signal in 3G SDI, 4K and 8K video feeds.

These cables are packaged in standard D38999 contact configurations and can be installed in any D38999 connector that conforms to the MIL-STDs. The interfaces are based on SV's tried and true MIL-STD BMZ, SMPM and SMPS series with minor modifications to mating end and internal geometries to maintain consistent 75 Ohm impedance throughout the mated pair.

The below plots show VSWR and Impedance measurements for a mated pair of 75 Ohm SMPM (Size 12) D38999 contacts (See Figures 1 and 2). The measurement has been gated before and after the mated pair to isolate the performance of the contacts.

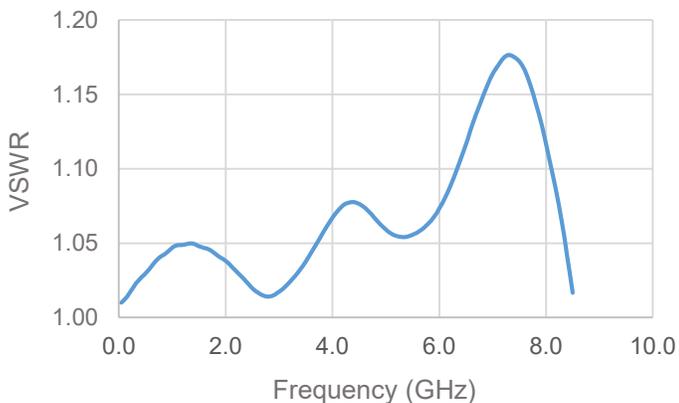


Figure 1: VSWR Plot

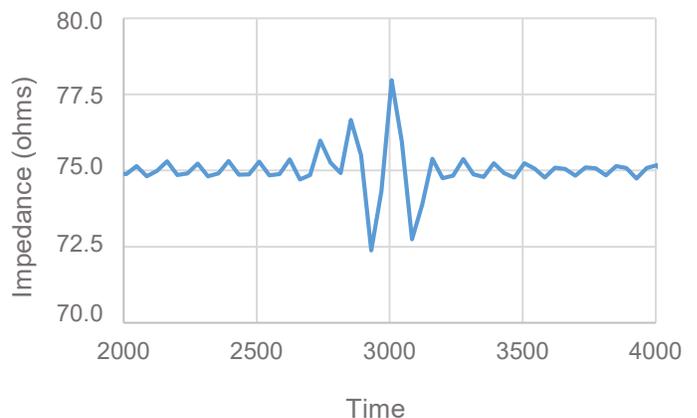


Figure 2: Impedance Plot

## 75 Ohm BMZ (Size 8) D38999 Contacts



9341-40064  
Pin

9351-40046  
Socket

SV's 75 Ohm contacts in the size 8 form factor are based off of SV's BMZ series of 50 Ohm connectors. The 50 Ohm BMZ series is an industry standard per MIL-STD-348. **SV's 75 Ohm BMZ contacts are intermateable only to each other and will not mate with standard 50 Ohm BMZ connectors because of the differences in the inner and outer conductor diameters.**

## 75 Ohm SMPM (Size 12) D38999 Contacts



9341-40063  
Pin

9351-40045  
Socket

SV's 75 Ohm contacts in the size 12 form factor are based off of SV's SMPM series of 50 Ohm connectors. The 50 Ohm SMPM series is an industry standard per MIL-STD-348 and is a common connector in RF applications. **SV's 75 Ohm SMPM contacts are intermateable only to each other and will not mate with standard 50 Ohm SMPM connectors because of the differences in the inner and outer conductor diameters.**

## 75 Ohm SMPS (Size 16) D38999 Contacts



9341-40057  
Pin

9351-40040  
Socket

SV's 75 Ohm contacts in the size 16 form factor are based off of SV's SMPS series of 50 Ohm connectors. The 50 Ohm SMPS series is an industry standard currently in adoption by the DLA (at the time of this document release). **SV's 75 Ohm SMPS contacts are intermateable only to each other and will not mate with standard 50 Ohm SMPS connectors.**

## Standard Cable Assembly Configurations

Part Number	Description
7093-0279	75 Ohm BMZ (Size 8) D38999 Socket Contact to MCX Male 12" Cable Assembly for RG179 Cable
7093-0280	75 Ohm BMZ (Size 8) D38999 Pin Contact to MCX Male 12" Cable Assembly for RG179 Cable
7093-0277	75 Ohm SMPM (Size 12) D38999 Socket Contact to MCX Male 12" Cable Assembly for RG179 Cable
7093-0278	75 Ohm SMPM (Size 12) D38999 Pin Contact to MCX Male 12" Cable Assembly for RG179 Cable
7093-0275	75 Ohm SMPS (Size 16) D38999 Socket Contact to MCX Male 12" Cable Assembly for RG179 Cable
7093-0276	75 Ohm SMPS (Size 16) D38999 Pin Contact to MCX Male 12" Cable Assembly for RG179 Cable