

## MARKER SLEEVE DESIGN CONSIDERATIONS

Over the years, we have noted that marker sleeve and marking issues account for a disproportionate number of delays in procuring and delivering cable assemblies. To avoid such delays, consider the following:

### MARKER MATERIAL

The most frequently specified marker sleeve material on high performance, military, and aerospace microwave cable assemblies is crosslinked, flexible polyolefin, per MIL-DTL-23053/5, class 1. With an operating temperature range of  $-55^{\circ}\text{C}$  to  $+135^{\circ}\text{C}$ , this material is most widely available in white and black. On formed semi-rigid cable assemblies, the optimum size tubing is dependant on the cable size, marker length, and the part's bend configuration. Tightly bent cable assemblies make installing tubing more difficult, and smaller diameter cable types can be distorted during the process.

In cases where the marker sleeve is being used strictly for identification purposes, We recommend omitting the size identifier and specifying only MIL-DTL-23053/5. This will ensure compliance with critical parameters.

### MARKING

The amount of information that can be printed on a given marker sleeve is a function of its diameter, length, character height, and printing method. To avoid conflicts between marker size and marker legend and allow use of automated printing methods, use the following guidelines:

### LINES PER SLEEVE

Cable diameter	TYPICAL TUBING DIAMETER	MAXIMUM # OF LINES - 9 PT.	MAXIMUM # OF LINES - 12 PT.
0.047"	3/32"	1	1
0.085"	3/16"	2	1
0.116"	1/4"	2	2
0.141"	1/4"	2	2
0.250"	3/8"	4	3

### CHARACTER CALCULATOR

FONT SIZE	CHARACTER HEIGHT	TUBING LENGTH (INCHES) / CHARACTERS PER LINE						
		0.50"	0.75"	1.00"	1.25"	1.50"	1.75"	2.00"
9 pt	0.093"	6	10	13	17	20	25	27
12 pt	0.120"	4	7	10	12	15	18	20

- NOTES:**
- Character height is prior to shrinking. Final character height is a function of tubing recovery.
  - Other marking methods are available upon request; hot stamp techniques will allow printing on both sides of tubing.