

# Table of Contents

## Vishay Foil Resistors



# Bulk Metal® Foil Technology

	<u>Page No.</u>
7 Technical Reasons to Specify Bulk Metal® Foil Resistors .....	6
7 Technical Reasons to Specify Bulk Metal® Foil Resistor Networks .....	35
5 Technical Reasons to Specify Bulk Metal® Foil Potentiometers .....	142
<b>SURFACE MOUNT</b>	
<b>AEROSPACE/INSTRUMENTATION</b>	
<b>DISCRETE</b>	
SMR1D .....	Molded Resistor .....
SMR3D .....	Molded Resistor .....
VSM0805.....	Discrete Chip Resistor .....
VSM1506.....	Discrete Chip Resistor .....
VSM2110.....	Discrete Chip Resistor .....
VSM2018.....	Discrete Chip Resistor .....
<b>VOLTAGE DIVIDER</b>	
VSMD1505 .....	Discrete Chip Resistor .....
<b>CURRENT SENSE</b>	
VCS2516 .....	Current Sensing Chip Resistor 1 Watt (4 Terminals) .....
VPR220S, VPR221S .....	TO-220 Configuration (2/4 Terminals) .....
<b>PRND NETWORKS</b>	
Characteristics of Available Packages .....	45
VSM42.....	Surface Mount .....
VSM45.....	Surface Mount .....
VSM46.....	Surface Mount .....
VSM85.....	Surface Mount .....
VSM86.....	Surface Mount .....
VSM87.....	Surface Mount .....
VSM88.....	Surface Mount .....
VSM89.....	Surface Mount .....
1476 .....	Flat Pack .....
<b>NETWORK EXPRESS PROTOTYPE SERVICE</b> .....	
<b>NETWORK WORKSHEET</b> .....	
<b>INDUSTRIAL</b>	
<b>DISCRETE</b>	
SMRC1D .....	Molded Resistor .....
SMRC3D .....	Molded Resistor .....
VSMC1506 .....	Discrete Chip .....
VSMC2110 .....	Discrete Chip .....
<b>THROUGH HOLE</b>	
<b>ULTRA PRECISION</b>	
<b>DISCRETE</b>	
Z201 .....	Zero TCR/Plastic Package .....
VHP100/102 .....	Zero TCR Resistor...Hermetically Sealed .....
VHP101/103 .....	Zero TCR Resistor...Hermetically Sealed .....
<b>AEROSPACE/INSTRUMENTATION</b>	
<b>DISCRETE</b>	
S102C/J.....	Radial Leads 150 kΩ Maximum .....
S102K/L.....	Radial Leads 150 kΩ Maximum .....
S104D/F .....	Radial Leads 500 kΩ Maximum .....
S104K/L .....	Radial Leads 500 kΩ Maximum .....

### **THROUGH HOLE CONTINUED**

	<b>Page No.</b>
S105D/F .....	71
S105K/L.....	71
S106D .....	71
S106K.....	71
S102TF.....	75
Matched Resistor Sets .....	76
VH102K/L .....	77
VHS102/VH102J .....	77
VHS555 .....	77
(RNC90Y Hermetically Sealed non-QPL).....	77

### **EXTENDED RANGE**

E102C/J.....	Increases Ohmic Value (S102C & S102J).....	81
--------------	--	----

### **MILITARY**

RNC90Z (Established Reliability) .....	82
RNC90Y (Established Reliability) .....	84
S555/S22-1 (Non QPL) .....	84
Improved Performance Testing .....	87

### **VOLTAGE DIVIDER NETWORKS**

VHD200 .....	2 Resistor Hermetic (any value).....	88
VHD144 .....	2 Resistor Hermetic (Specific Value) .....	88
300144.....	2 Resistors .....	90
300145.....	4 Resistors .....	90
300190-9 & 300210-12 (2R, 3R, 4R).....	2 Resistors through X Resistors .....	92

### **POWER CURRENT SENSE**

VPR220, VPR221 .....	TO-220 Configuration (2/4 Terminals) .....	96
VPR5 & 7 .....	5/7 Watts (4 Leads) .....	98
VFP-3 & VFP-4.....	10 Watts (2/4 Leads) .....	99
V3PR .....	Various Configurations & Powers .....	102
VHP-3 & VHP-4.....	TO3 Style (2/4 Leads) Hermetically Sealed.....	105
VPR247 .....	TO247 Style (4 Leads) Hermetically Sealed.....	105
VCS101, 103 & 401.....	Uninsulated Element.....	109
VCS201 & 202.....	Conformal Coated.....	111
VCS232 .....	Conformal Coated.....	111
VCS301 & 302.....	Highest Precision .....	113
VCS331 & 332.....	Highest Precision .....	113

### **PRND NETWORKS (QPL)**

1445Q, 1446Q (QPL) .....	116
--------------------------	-----

### **PRND NETWORKS**

1401 .....	119
1403 .....	120
1413 .....	121
1417 .....	122
1419 .....	123
1421 .....	124
1422 .....	125
1442 .....	126
1445 .....	126
1446 .....	126
1457 .....	128
1460 .....	129
1461 .....	130
1463 .....	130
1464 .....	130
1466.....	130

<b>NETWORK EXPRESS PROTOTYPE SERVICE</b> .....	131
--	-----

<b>NETWORK WORKSHEET</b> .....	132
--------------------------------	-----

# Table of Contents

## Vishay Foil Resistors



### THROUGH HOLE CONTINUED

Page No.

<b>METROLOGY/LABORATORY</b>		
VHP202 .....	Hermetically Sealed .....	133
VHA412 .....	Hermetically Sealed .....	133
VHA414 .....	Hermetically Sealed .....	133
VHA512 .....	Hermetically Sealed .....	133
VHA516-4 .....	Hermetically Sealed .....	133
VHA516-5 .....	Hermetically Sealed .....	133
VHA516-6 .....	Hermetically Sealed .....	133
VHA518-7 .....	Hermetically Sealed .....	133
VHA518-8 .....	Hermetically Sealed .....	133
VHA518-9 .....	Hermetically Sealed .....	133
VHA518-10 .....	Hermetically Sealed .....	133
VHA518-11 .....	Hermetically Sealed .....	133
<b>INDUSTRIAL</b>		
<b>DISCRETE</b>		
VSR/VSRJ .....	Radial Leads .....	136
VSR4 .....	Radial Leads .....	136
VSR5 .....	Radial Leads .....	136
VRM .....	Radial Leads .....	137
VTA 52 - 56 .....	Axial Leads .....	138
VMTA55/VMTB60 .....	Axial Leads .....	138
<b>VOLTAGE DIVIDER</b>		
VSR144 .....		140
<b>TRIMMING POTENTIOMETERS</b>		
<b>AEROSPACE/INSTRUMENTATION</b>		
1240 .....	1/4 inch square .....	146
1260 .....	3/8 inch square .....	149
1202 .....	1-1/4 inch rectilinear .....	152
<b>MILITARY VERSION</b>		
1242 (RJ26 Style) .....		156
<b>INDUSTRIAL</b>		
1248 .....	1/4 inch square .....	159
1268 .....	3/8 inch square .....	161
1208 .....	1-1/4 inch rectilinear .....	163
1280G, 1285G .....	3/4 inch rectilinear .....	166
<b>HYBRID</b>		
<b>CHIP</b>		
V5X5, V15X5 & V15X10 .....	Discrete Chip Resistors/Wirebondable .....	170
<b>CUSTOM CHIP NETWORKS AND ARRAYS</b>		175
<b>GLOSSARY</b>		175