# Octonet Contact: The Superior Ethernet Contact System for MIL-DTL-38999, Series III





Pin for 24 awg

Socket for 24 awg

Pin PCB Tail

Socket PCB Tail

## **OVERVIEW**

Eight strategically spaced inner contacts form four 100 Ohm matched impedance differential pairs.

#### **FEATURES**

- + Available in size 8 crimp termination style
- + Also available in PC Tails
- + Can be installed in existing size 8

  Quadrax cavities
- + Meets performance specifications of CAT-6A cable
- + 10G Ethernet compliant
- + Overall higher bandwidth than standard CAT5E Quadrax-supports up to 4.0 Gbps per pair
- + Enhanced crosstalk performance (compared to standard Quadrax)
- + Supports wire ranges 26 to 24 gauge
- + Requires modification of MIL-DTL-38999 connector to accommodate keyed contacts

## **BENEFITS**

- + Easy drop-in replacement to installed connectors no need to redesign
- + Self removing contact feature no extra contact extraction tool needed (24 Gauge only)

Contact Style	Part Number	*Cable	AWG
Crimp Pin	21-032904-001	Thermax: MX10G-24HP	24
Crimp Socket	21-032905-001	Thermax: MX10G-24HP	
Crimp Pin	21-032904-011	W.L.Gore: RCN8966-24	
Crimp Socket	21-032905-011	W.L.Gore: RCN8966-24	
Crimp Pin	21-032904-021	PIC E6A3824	
Crimp Socket	21-032905-021	PIC E6A3824	
PCB Pin	21-032906-001		
PCB Socket	21-032907-001		

<sup>\*</sup>Not limited to cables shown

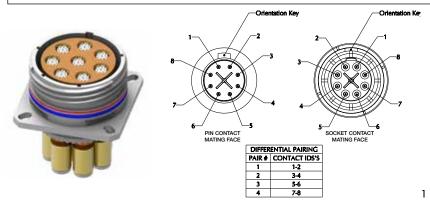
### **SPECS**

Environmental Sealing: IAW connector specification
Corrosion Resistance: 500 hours salt spray

EMI Shielding: 360 degree shielding on each pair

Mating Cycles: 500 cycles

Voltage Rating: 500 Vrms max @ sea level Dielectric Withstanding Voltage: 500 VAC RMS sea level

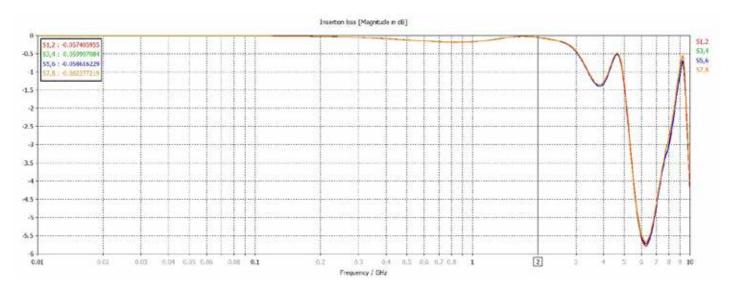


# SIGNAL INTEGRITY CONTACT DATA

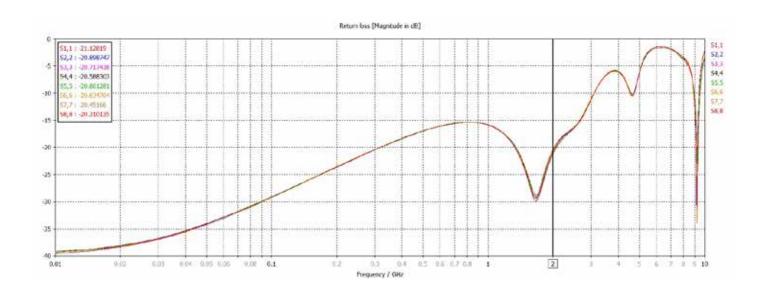




# **Contact Differential Insertion Loss**

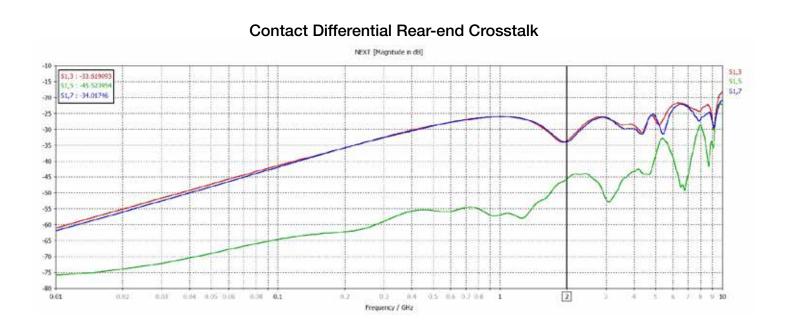


# **Contact Differential Return Loss**

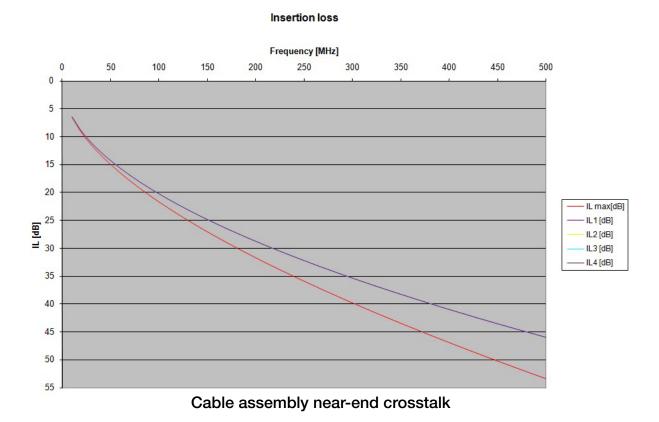






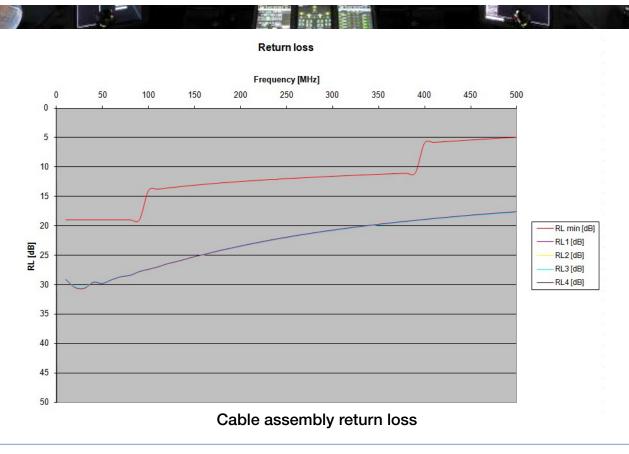


# 10GBASE-T data (two mated contacts on each end of 100 meter CAT6a cable)

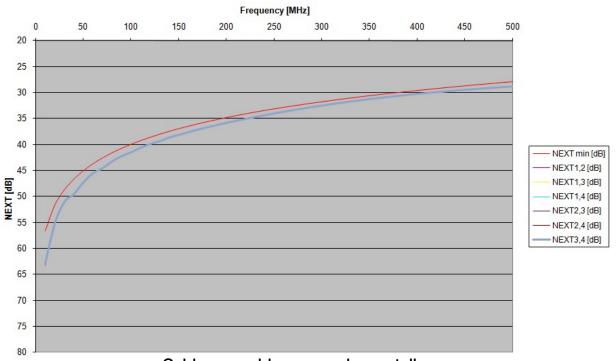






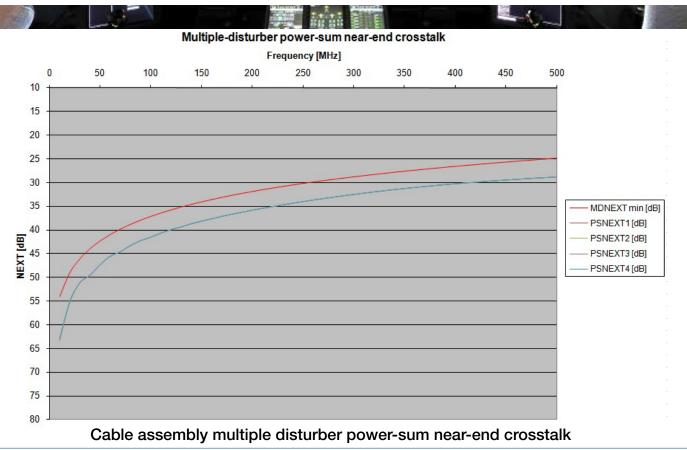


### Near-end crosstalk

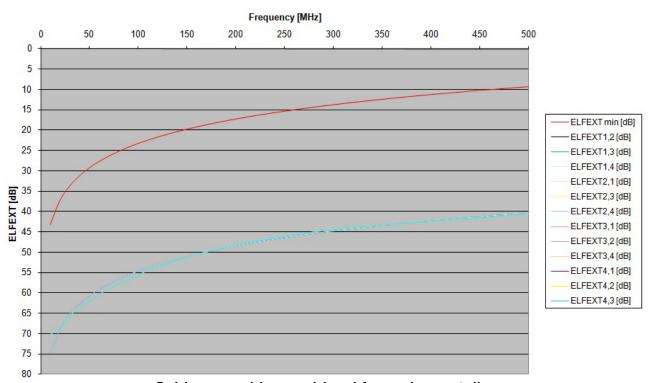


# SIGNAL INTEGRITY CONTACT DATA



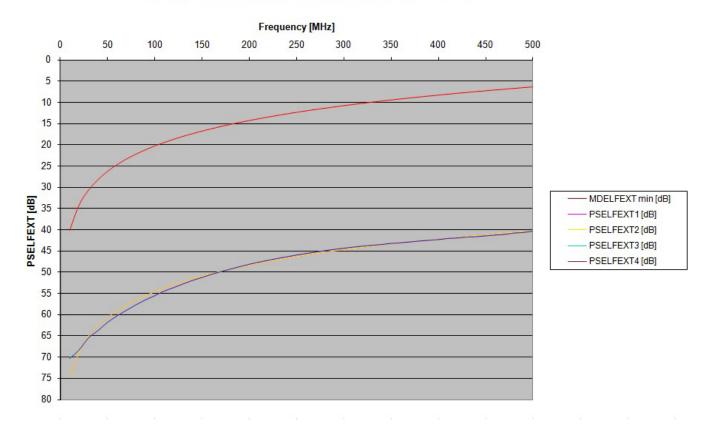


## Equal-level far-end crosstalk





#### Multiple disturber power-sum equal-level far-end crosstalk



Cable assembly multiple disturber power-sum equal-level far-end crosstalk

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