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

Amphenol® Aerospace

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

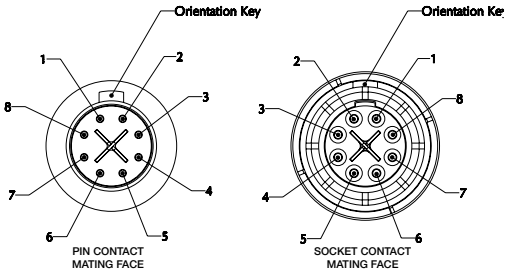
- Easy drop-in replacement to installed connectors no need to redesign
- Self removing contact feature - no extra contact extraction tool needed (24 Gauge only)

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		

*Not limited to cables shown

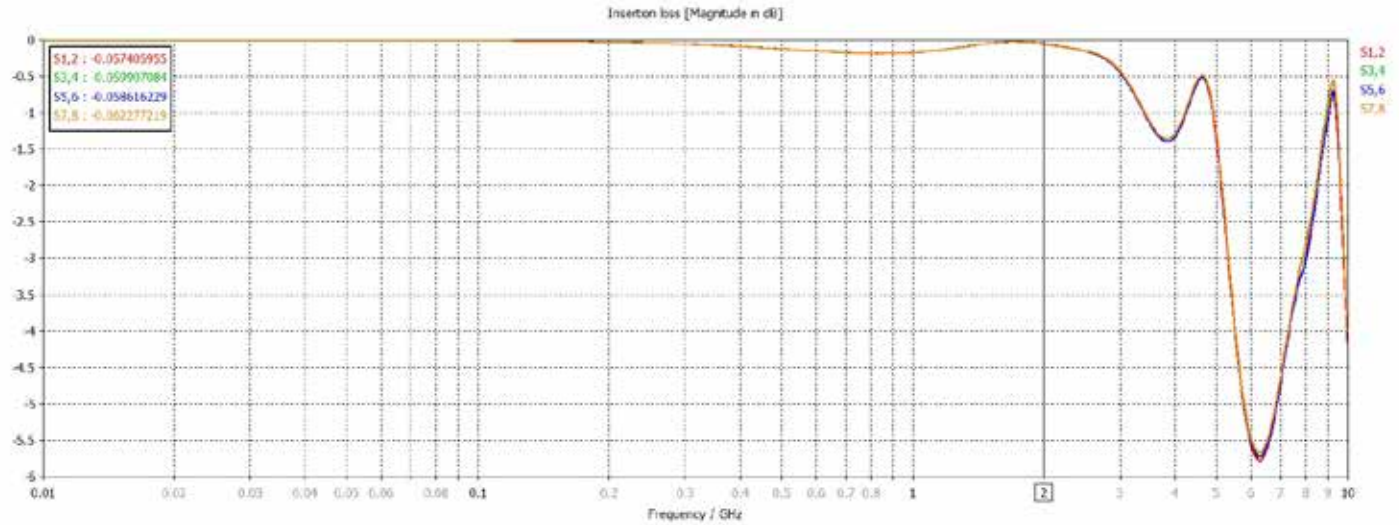
SPECS

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

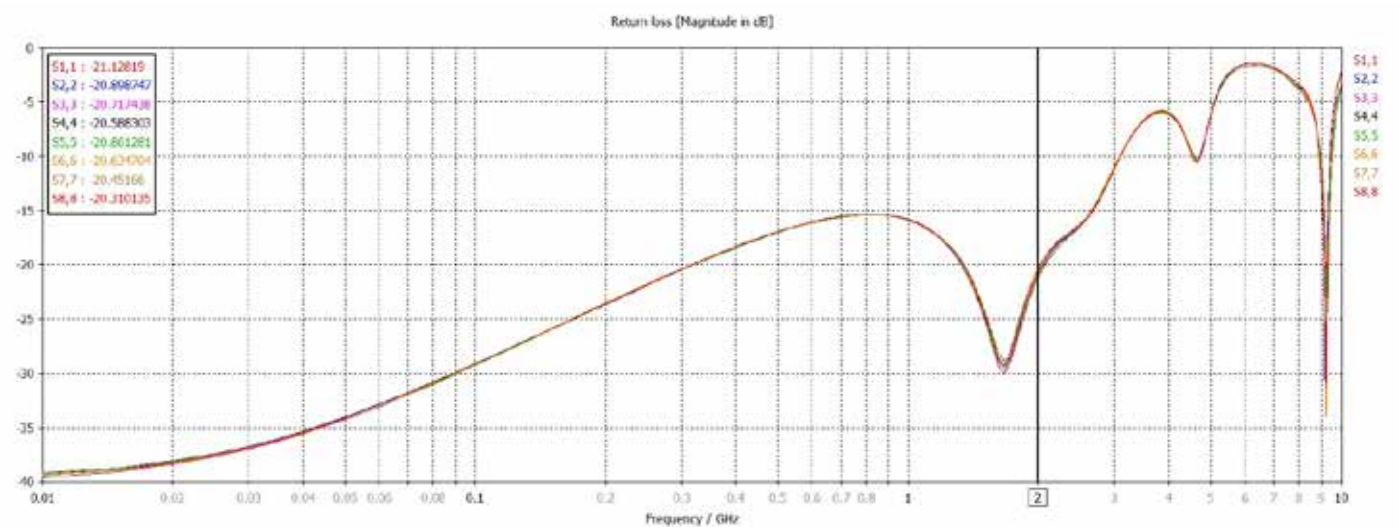


DIFFERENTIAL PAIRING	
PAIR #	CONTACT IDS'S
1	1-2
2	3-4
3	5-6
4	7-8

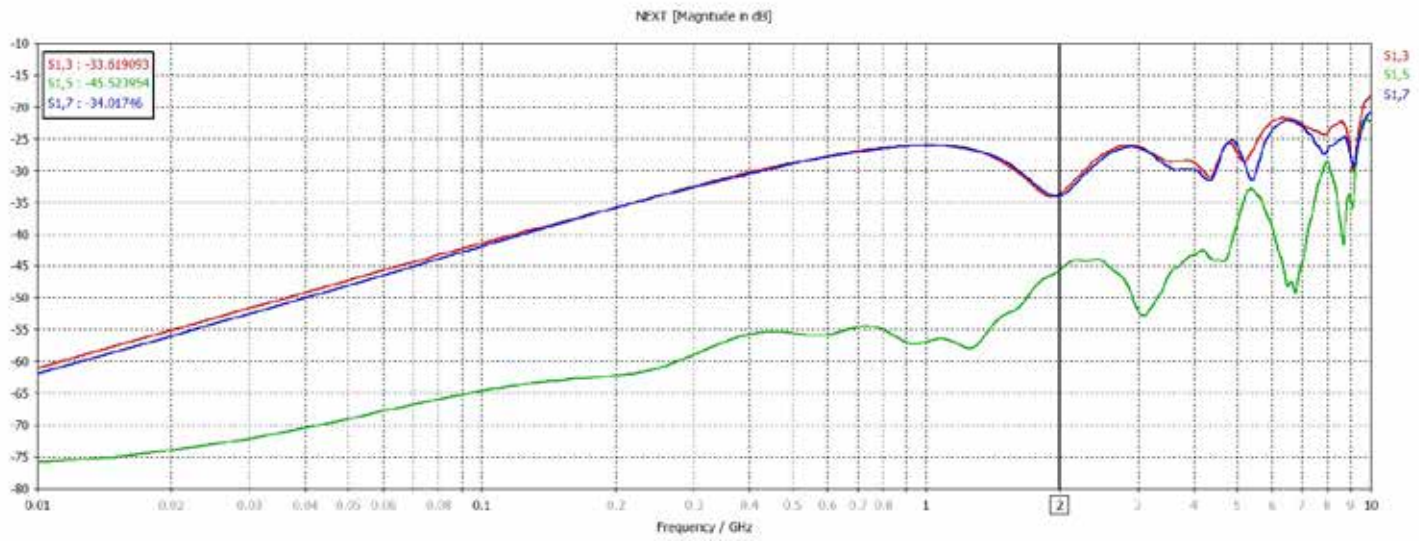
Contact Differential Insertion Loss



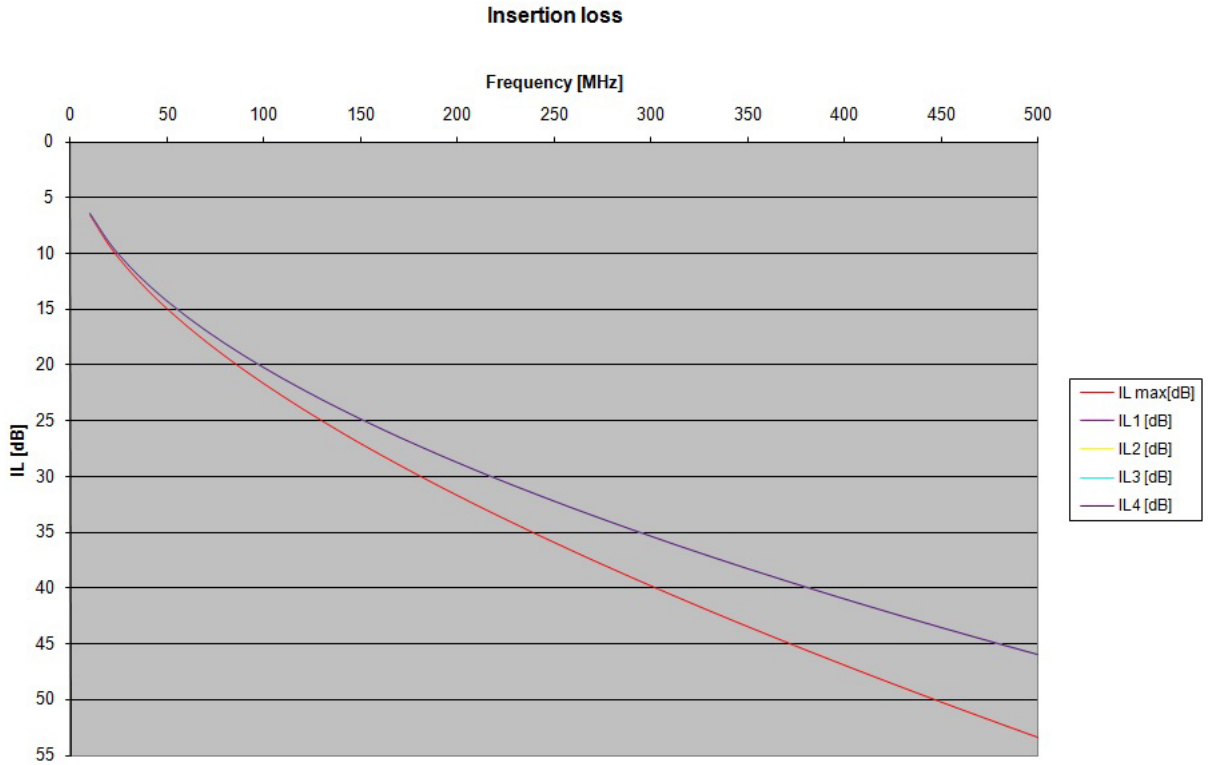
Contact Differential Return Loss



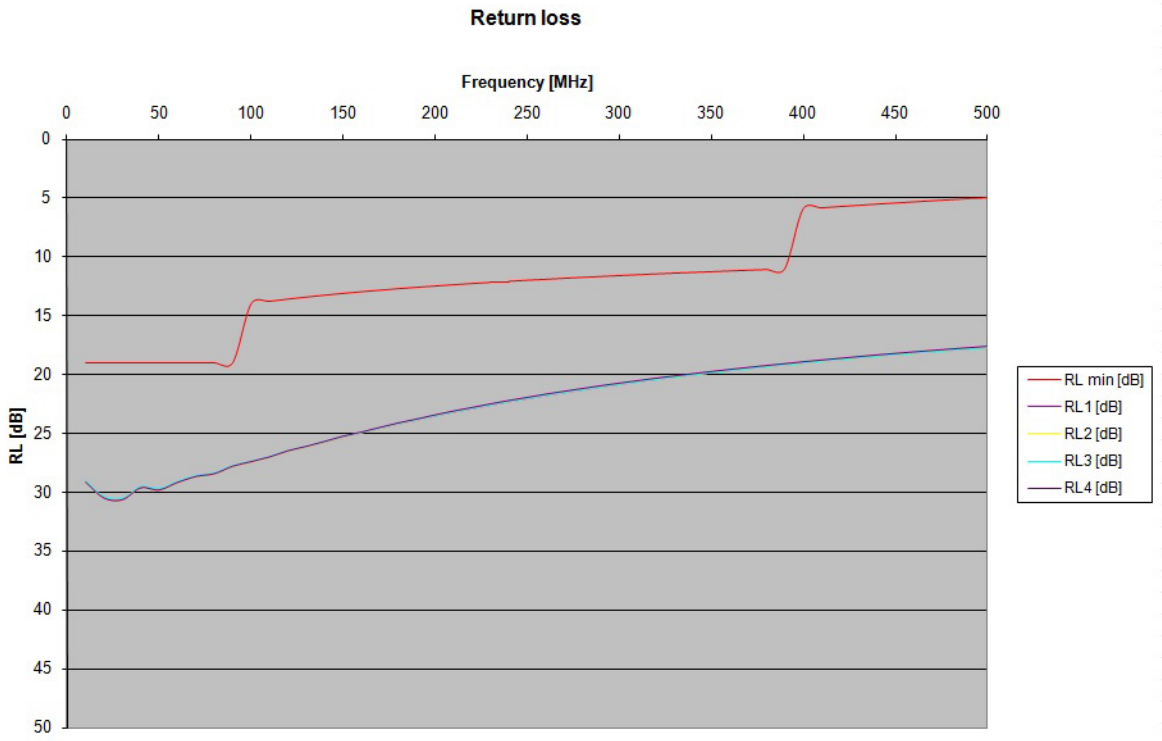
Contact Differential Rear-end Crosstalk



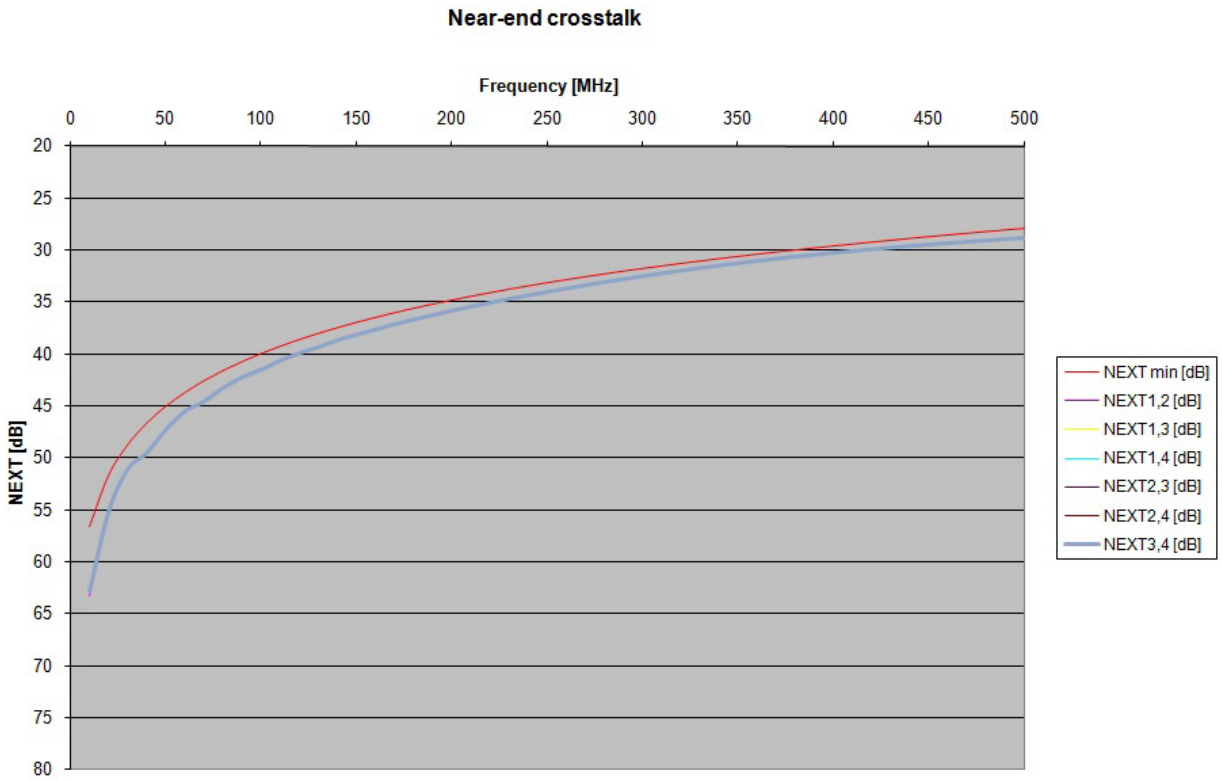
10GBASE-T data (two mated contacts on each end of 100 meter CAT6a cable)



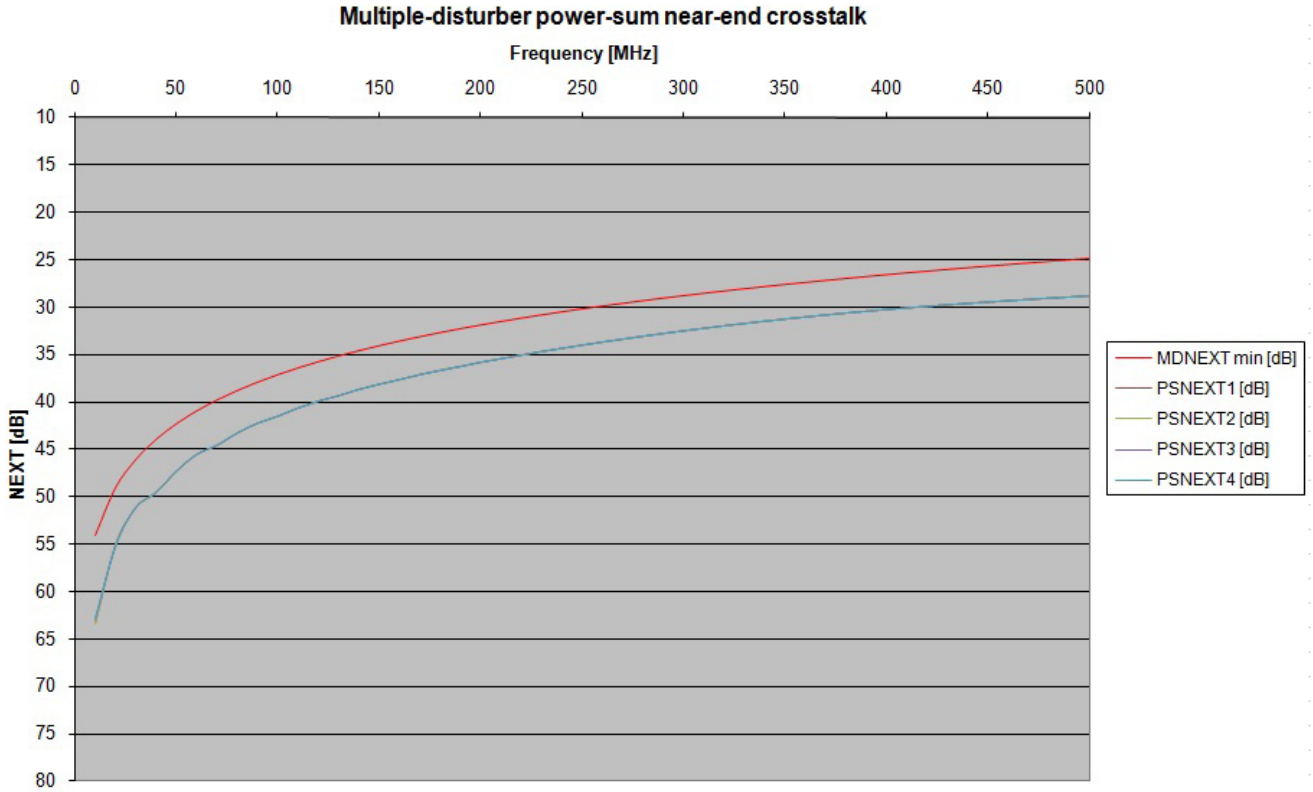
Cable assembly near-end crosstalk



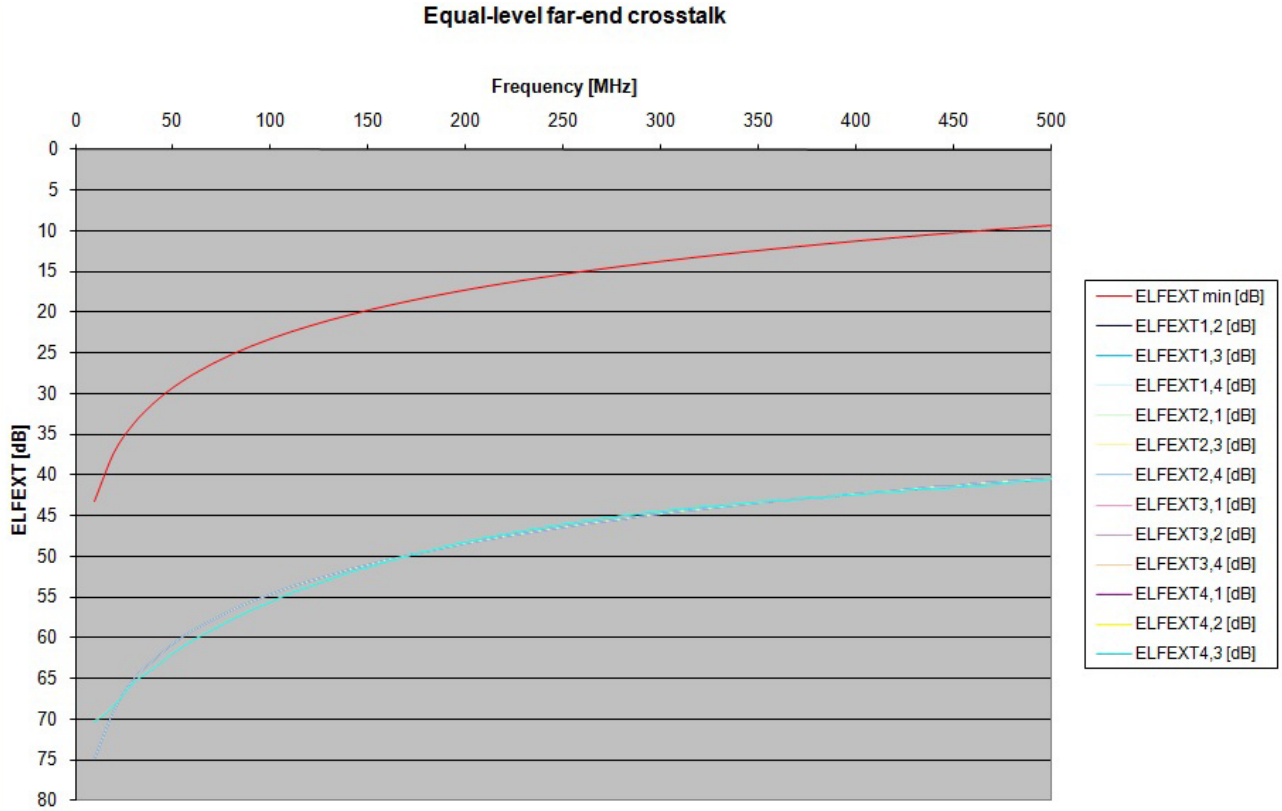
Cable assembly return loss



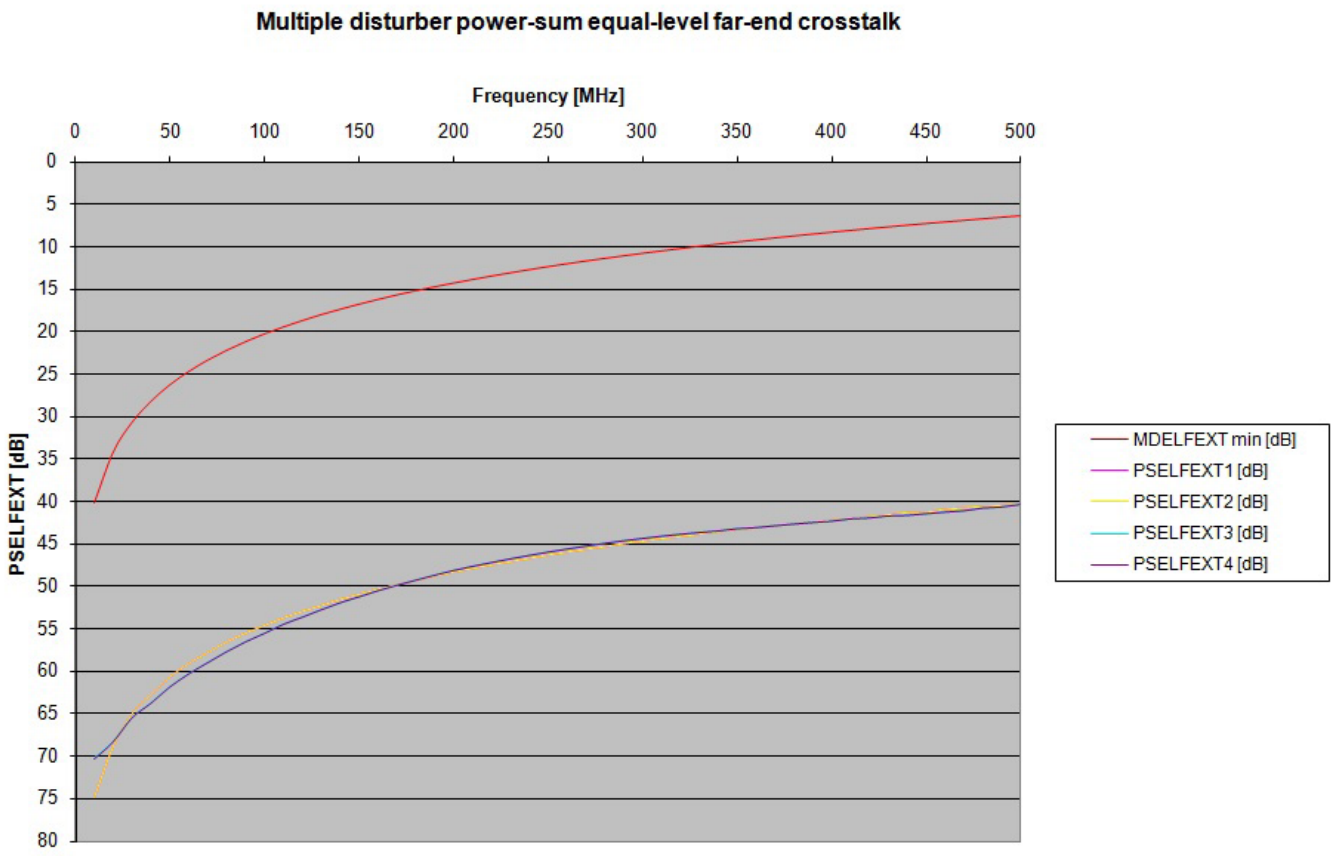
Cable assembly near-end crosstalk



Cable assembly multiple disturber power-sum near-end crosstalk



Cable assembly equal-level far-end crosstalk



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

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