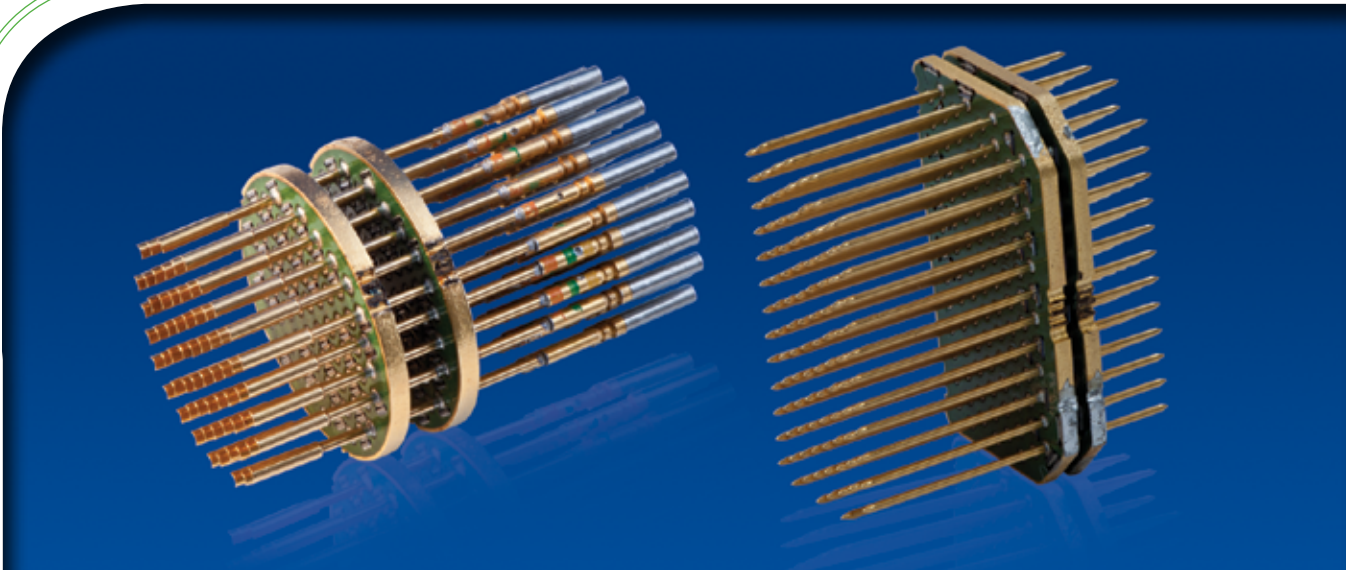


TVS Connectors

Transient Voltage Suppression



Internal View of Circular and Rectangular TVS Components

WHY TVS?

Military and aerospace avionics suppliers can design electromagnetic pulse (EMP) and lightning protection into their modern equipment prior to encountering a catastrophic failure. Carlisle Interconnect Technologies (CarlisleIT) can offer this protection using less space and weight than a conventional Transient Voltage Suppression (TVS) connector. Patented design for diode packaging can be used in several applications including military aircraft, commercial aircraft and helicopter environments.

PERFORMANCE BENEFITS

- » Space and weight saving
- » Enhanced performance
- » Can be packaged in conjunction with filtering
- » Lower Cost and Leadtimes

DESIGN CAPABILITIES

FEATURES

CarlisleIT packages TVS protection into all of our connector product lines utilizing an embedded diode (embedded into a PCB) for space and weight savings as well as improved performance. This innovative design resembles (mechanically) a filter assembly so it can be packaged into the connector in the same proven manner and in tandem if necessary. TVS connectors are available with 600 to 2500w diodes to meet some of the highest levels of RTCA DO-160 protection, screened to J level standards and capable of meeting the environmental requirements of their specific Mil-spec's.

Power		Standoff Voltage	Breakdown Voltage	UniPolar/ BiPolar	Capacitance
10/100 μ SEC Exponential Pulse	8/20 μ SEC Exponential Pulse				
600W	3,600W	5 to 188VDC	7VDC to over 200VDC	Both	<100pF with low cap option
1,500W	9,000W	5 to 188VDC	7VDC to over 200VDC	Both	<100pF with low cap option
40,000W	220,000W	12 to 78 VDC	7VDC to over 200VDC 14 to 91.3VDC	BiPolar	consult the factory
New Higher Energy to 40kW					



MECHANICAL & ENVIRONMENTAL PERFORMANCE

Connectors are designed to meet customer specifications and the applicable MIL Specification requirements.

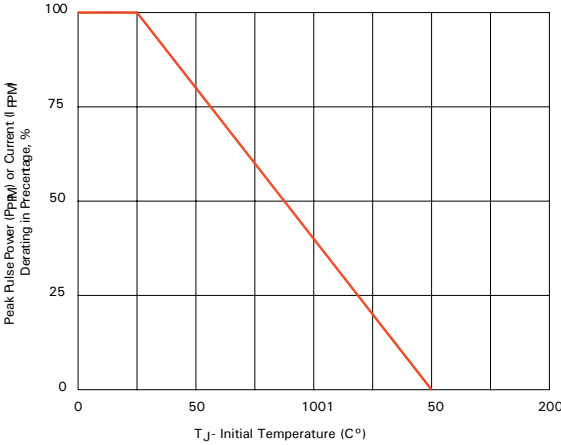
Test Description	Procedure
Temperature Cycling	Method 1003, MIL-Std-1344, Condition A
Moisture Resistance	MIL-STD-202, Method 106
Durability	500 Matings at a rate of 200 ± 100 cycles per hour
Shock	Method 2004, MIL-STD-1344, Test Condition D
Vibration	Method 2005, MIL-STD-1344, Test Condition VI, Letter J, 8 Hours longitudinal and perpendicular axes
Fluid Immersion	MIL-STD-1344, Method 1016, Fluids (a) and (d)
Salt Spray	MIL-STD-202, Method 101, Condition B
Humidity	MIL-STD-1344, Method 1002, Condition B



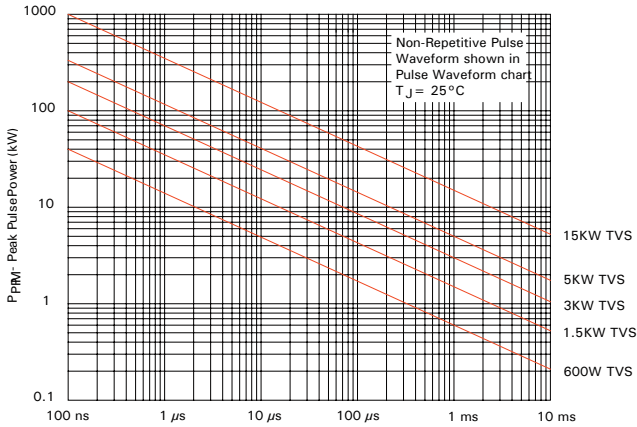
TVS CHARTS

Please see our [TVS Design Guide](#) for a complete road map to diode selection.

Derate Curve



Peak Power Curve



Peak Pulse Current Curve

