PRODUCT FAMILY

PYROTECHNIC BOLT & ROD CUTTERS

The Pyrotechnic Bolt Cutter (or Rod Cutter) is a pyrotechnic device engineered to include a blade, which, when initiated, will precision cut the bolt or rod which is set against an anvil. The entire device consists of an initiator (which could be our NSI initiator for space applications), a chisel shaped cutter blade, a blade positioning shear pin and an anvil in a cylindrical housing. The bolt or rod to be cut fits through a clearance hole in the housing, placing it against the anvil. When the initiator functions, the blade is accelerated and impacts the bolt, forcing it to cut through against the anvil. This cutting process completely fractures the high strength steel bolt or rod.

APPLICABLE SPECIFICATIONS

Operating Temperature:	-54 °C to + 71 °C (-65.2 °F to 159.8 °F)
Function Time:	With the application of the All-Fire current, the cutter will completely sever the target in <20 milliseconds
Reliability:	99% at 95% confidence level
Altitude:	10,000 feet underwater to Deep Space
Estimated Weight:	27 to 173 grams
Target Materials:	High strength steel bolts and rods up to 1/2 inch diameter

ELECTRICAL SPECIFICATIONS

Bridgewire Resistance 0.9 to 1.30 ohms
Insulation Resistance 100 megohms 500 VDC
No Fire 1 amp/ 1 Watt for 5 Minutes
Recommended All Fire 4.0 Amps for 50 millisecond duration
ESD 25KV Electrostatic discharge: 25 kV DC from 500 pF Cap thru a 5k ohm resistor – shorted pins to case and pin-to-pin
Electrical connections can be lead wire, bayonet or threaded connectors

ENVELOPE & DIMENSIONS

MIN / MAX CUTTER ENVELOPE