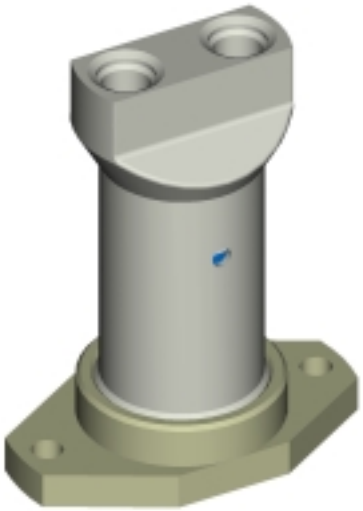
24225 Garnier Street
Torrance, California 90505
(310) 784-2100
www.hstc.com

Model SN9423-3

3/8” SEPARATION NUT

Description:

The separation nut releases a 3/8” threaded bolt (typically 3/8-24 UNJF-3A) when used with Hi-Shear PC154 booster cartridges. The gases released from the booster cartridges actuate internal components that release the bolted connection. Fully qualified and pyrotechnically redundant, the SN9423-3 separation nut has been proven extremely reliable in numerous earth-orbital and deep space applications. (Dimensions provided on page 2.)



SN9423-3 Separation Nut
(Shown without booster cartridges)

Maximum Weight: 185 grams

Performance Characteristics:

With PC154 booster cartridges: Releases loads as high as 10,000 lbf, and prior to actuation the nut can support loads as high as 12,500 lbf.

Functional Load: 10,000 lbf
Proof Load: 12,500 lbf

Release Time:

Defined as the period of time between application of current and complete exit of the bolt from the separation nut.

Release Time < 20 milliseconds

High Reliability:

.99995 reliability with .95 confidence.

Non-Destructive Lot Acceptance Requirements:

Visual and dimensional inspection, X-ray per MIL-STD-1576 (Method 1103) and MIL-STD-453 (quality level 2-2T), and N-ray per MIL-STD-1576 (Method 1404.)

Temperature:

Functional tests at –168 °F (-111 °C) and +266 °F (+130 °C) after temperature cycling per MIL-STD-1576 (Method 3407) or MIL-STD-1540.

Shock Survivability Testing:

See page 2. Tests performed per MIL-STD-1540 with inert or live cartridges installed.

Random Vibration Survivability Testing:

See page 2. Tests performed per MIL-STD-1540 with inert or live cartridges installed.

Note: Test levels represent previous design requirements, not design limits. Design and testing can be modified for unique customer requirements.

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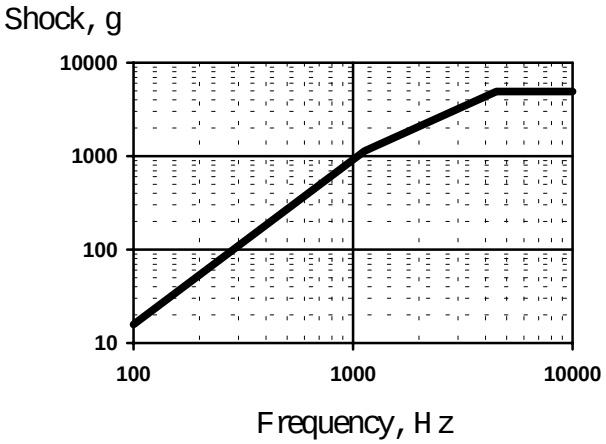
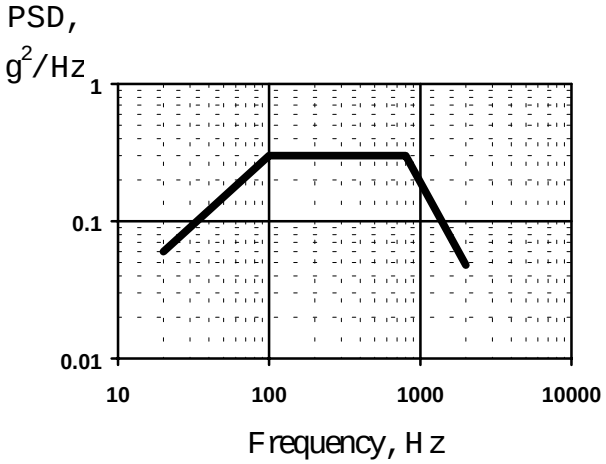
Shock Testing:

Three (3) shocks per axis along three (3) mutually perpendicular axes.



Vibration Testing:

Overall: 13.70 g_{rms}. Three orthogonal axes for two (2) minutes in each axis.



Interface Dimensions (inches):