

1SE192 Wire Cutter



The 1SE192 Wire Cutter is an electrically initiated pyrotechnic-powered device designed to cut electrical or other small-diameter wire.

The cutter is compact, lightweight, highly reliable and functions in less than 10 milliseconds. It has been used extensively in aerospace applications.

Variations

The 1SE192 has been produced with several ignition systems which fire at different firing energy levels. Other variations are possible in cutting capability, environmental, resistance and firing characteristics.

Characteristics

Some of the characteristics listed here are nominal; others are levels to which the units have been tested. There are no limits on design capabilities. Please consult an EaglePicher representative before using this data as a specification.

| Specifications | |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical | |
| Insulation Resistance @ 500 Vdc, Shunted Leads to Case, Before Firing | 50 megohms |
| Mechanical | |
| Size | See Drawing |
| Weight | 2.25 gm |
| Function Time | 10 ms Max. |
| Cutting Capability | 6 strands of .0049" (.1245 mm) dia. wire per MIS-14001 encased in high-temperature nylon sleeving per MIS-13919 or .014" (.355 mm) dia. music wire. |

| Specifications Continued | |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental | |
| Temperature | Operating range: -25°F to +125°F (-32°C to +52°C) |
| Storage | -80°F to +155°F (-62°C to +68°C) |
| Storage Time at 30% Relative Humidity | 5 years |
| Accelerated Storage Humidity | 48 hr at 95% relative humidity and 155°F (68°C) |
| Shock | 1/2 sine wave with a peak acceleration of 100g's and a duration of 10 ms. Five shocks in each of 2 directions along each of 3 mutually perpendicular axes. |
| Vibration MIL-STD-202, Method 204 Modified as Follows | Sinusoidal vibration along 3 perpendicular axes with a cycle of: 5-26 Hz @ 1.3 g's 26-52 Hz @ 0.036" (0.914 mm) d.a. 52-500 Hz @ 5.0 g's |
| Chemical | |
| Ignition Compound | KDNBF |
| Freight Classification | |
| Shipping Name | Wire Cutter |
| Identification Number | Not regulated as Class 1 |
| Hazard Classification | Not regulated as Class 1 |

1SE192

| Cutter | Bridge resistance @70°F (21°C) | All-fire current @ -25°F (-32°C) 10 ms | No-fire current @ 125°F (52°C) 5 min |
|---------|-----------------------------------|----------------------------------------------|--------------------------------------------|
| Type | Ohm | Amp, Min. | Amp, Max. |
| 1SE192A | 5.0 - 7.0 | 0.30 | 0.03 |
| 1SE192B | 4.0 - 6.0 | 0.55 | 0.10 |
| 1SE192C | 1.6 - 2.0 | 1.0 | 0.10 |
| 1SE192F | 0.09 - 0.29 | 4.0 | 1.0 (1 min) |

Safety

Maximum pyrotechnic weight:

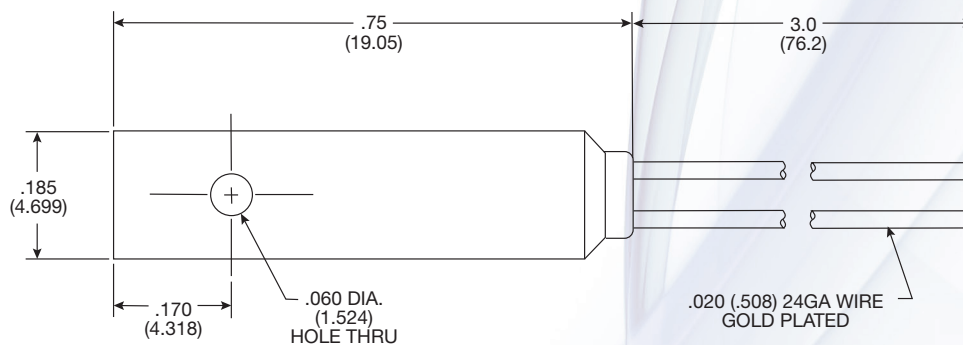
25 mg

Warning:

The cutter is self-contained and will not rupture under normal handling and testing conditions. If the cutter is exposed to temperatures above 200°F (93°C) or an electrical charge exceeding the specified no-fire current, it may rupture. If the unit is cut open before it has functioned, it may fire and emit some shrapnel.

If your company does not have a safety program, it is essential that one is established before explosive items are handled or used. For a brief overview of safety precautions, see the Safety Procedures Data Sheet or contact an EaglePicher representative.

Energetic devices are considered articles; therefore a Material Safety Data Sheet (MSDS) does not apply. However, MSDS may apply to individual components. For more information, contact your EaglePicher representative.



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