

EFI Detonator



The Excelitas low energy EFI detonator is designed for a wide variety of applications. The detonators are tested in accordance with MIL-DTL-23659 Appendix A. The EFI detonator offers a 2-pin and 6-pin version in a similar form factor and are available at competitive pricing for immediate delivery. Pricing and availability upon request.

The chip slapper consists of an exploding metal foil, covered by a polyimide flying plate, deposited on a ceramic “chip” substrate. The assembly is laser welded to ensure the device is hermetic to a leak rate of 10^{-6} ATM-CC/SEC. Excelitas manufactures the EFI Detonator with either 2 or 6 pin TO-5 header that can be utilized as surface mount, plugged into a connector, or attached to a flexible tape strip line.

The EFI Detonator exceeds the mechanical and thermal requirements of MIL-DTL-23659 and operates at temperatures ranging from liquid Nitrogen (-196°C) to over 200°C . Aggressive long term aging studies have shown that they have a simulated reliability of hundreds of years. The design of the EFI Detonator provides easy control of the critical parameters, resulting in consistent performance from one device to the next.

Features

- Low cost EFI
- Low firing energy
- Commercial grade
- Immediate availability
- MIL-STD-1316 compliant design
- MIL-STD-1901 compliant design
- Hermetic to 10^{-6} ATM-CC/SEC
- Demonstrated ability to initiate various booster and main charges
- Wide temperature operating range (-196° to 200°C)
- Full lot and serialization control
- Manufactured in state-of-the-art ISO 9001 facility

Applications

- Safe and Arm Devices
- Ignition Safety Devices
- Warheads
- Rocket Motor initiation
- Payload launch vehicles
- Oil and gas applications

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TABLE 1 Configurations

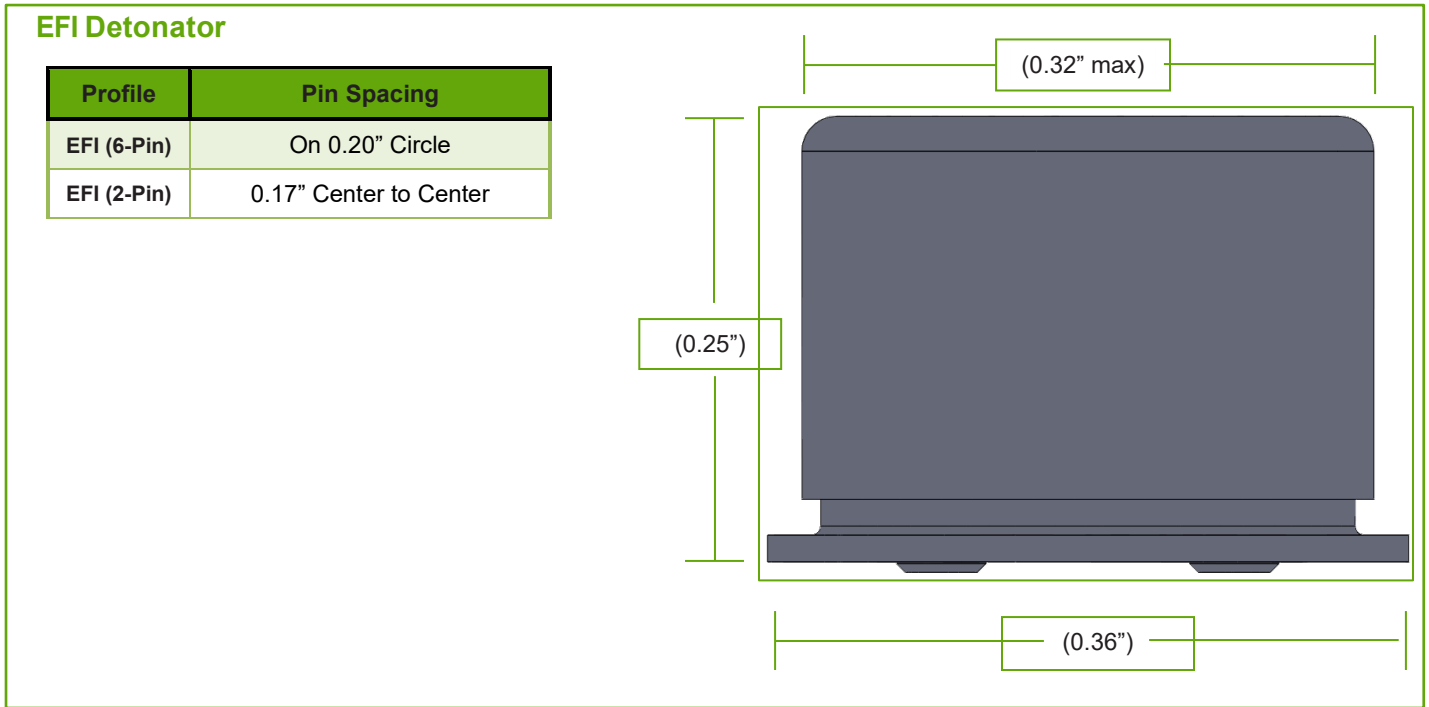
Product	# Pins	Firing Energy	Maximum Explosive Load	Description
EFI (6-Pin)	6 Pin	Low	0.12 g HNS IV	Standard Profile
EFI (2-Pin)	2 Pin	Low	0.12 g HNS IV	Standard Profile

TABLE 2 EFI Detonator Parameters

Typical Parameter (at ambient temp)	Typical Value
Mean Threshold Voltage Low Energy*	920 V
Standard Deviation (relative to mean)	1.5%
Variation of mean at Temperature (-54 C to +71 C)	±3%
.998 All Fire	1030 V
.99999 No-Fire	670 V
Dent Depth (standard output)	19 mils
Proven Temperature Operating Range	-196 to +200°C
Proven Long Term Temperature Storage	111°C
Maximum No Damage Current (1 minute)	8 Amps
Diameter (not including flange)	0.324 in max
Diameter (including flange)	0.36 in
Height (Top to base, excluding pins)	0.25 in
Weight	1.3 - 1.9 g
Pin Length (6 Pin Detonator)	0.35 in max
*Strongly dependent on firing system parameters.	

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FIGURE 1 Packaging Dimensions



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Excelitas Technologies® is a leading industrial technology manufacturer focused on delivering innovative, market-driven photonic solutions to meet the illumination, optical, optronic, sensing, detection and imaging needs of our OEM and end-user customers. Serving a vast array of applications across biomedical, scientific, semiconductor, industrial manufacturing, safety, security, consumer products, defense, and aerospace sectors, Excelitas stands committed to enabling our customers' success in their many various end-markets. Our team consists of more than 7,500 professionals working across North America, Europe, and Asia to serve customers worldwide.

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