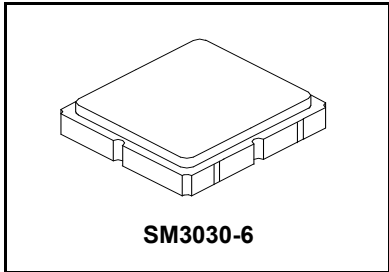


SF2137E-2

**869.00 MHz
SAW Filter**



- Steep Roll-off SAW Filter for 869.00 MHz Unlicensed Band
- Complies with Directive 2002/95/EC (RoHS)
- No Matching Required for Operation in 50Ω Environment
- Complies with AEC-Q200



A1 Maximum Ratings

| Rating | Value | Units |
|--|-------------|-------|
| Input Power Level | 13 | dBm |
| DC Voltage on any Non-ground Terminal | 5 | V |
| Operable Temperature | -45 to +125 | °C |
| Storage Temperature Range in Tape and Reel | -40 to +85 | °C |
| Soldering Profile Maximum Temperature, 5 cycles/10 s maximum | 265 | °C |

B1 Electrical Characteristics

Operating Temperature Range -40°C to +85°C

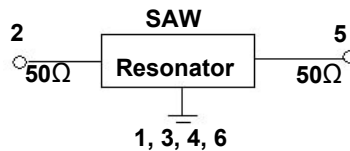
| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|----------------------------------|-------|-------|-----|--------|-----|-------------------|
| Center Frequency | f_C | | | 869.00 | | MHz |
| Insertion Loss, 868 to 870 MHz | IL | | | 2.3 | 3.0 | dB |
| Amplitude Ripple, 868 to 870 MHz | | | | 0.3 | 0.6 | dB _{p-p} |
| Attenuation Referenced to 0 dB: | | | | | | |
| 100 to 300 MHz | | | 45 | 50 | | dB |
| 300 to 845 MHz | | | 40 | 45 | | |
| 845 to 853 MHz | | | 38 | 43 | | |
| 879 to 883 MHz | | | 15 | 30 | | |
| 883 to 915 MHz | | | 40 | 45 | | |
| 915 to 945 MHz | | | 45 | 50 | | |
| 945 to 1200 MHz | | | 45 | 55 | | |
| 1200 to 2000 MHz | | | 35 | 40 | | |
| Source Impedance | Z_S | | | 50 | | Ω |
| Load Impedance | Z_L | | | 50 | | Ω |

| | | | | | | |
|--|---|--|--|--|--|------------------|
| Case Style | SM3030-6 3.0 x 3.0 mm Nominal Footprint | | | | | |
| Lid Symbolization, Y=year, WW=week, S=shift, Dot=pin 1 indicator | B16, <u>Y</u> WWS | | | | | |
| Standard Reel Quantity | Reel Size 7 Inch | | | | | 500 Pieces/Reel |
| | Reel Size 13 Inch | | | | | 3000 Pieces/Reel |

Electrical Connections

| Connection | Terminals |
|-----------------|------------|
| Port 1 (Input) | 2 |
| Port 2 (Output) | 5 |
| Case Ground | All others |

Test Circuit



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_c .
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. The design, manufacturing process, and specifications of this filter are subject to change.
5. US and international patents may apply.
6. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

A2 Maximum Ratings

| Rating | Value | Units |
|--|-------------|-------|
| Input Power Level | 13 | dBm |
| DC Voltage on any Non-ground Terminal | 5 | V |
| Operable Temperature | -45 to +125 | °C |
| Storage Temperature Range in Tape and Reel | -40 to +85 | °C |
| Soldering Profile Maximum Temperature, 5 cycles/10 s maximum | 265 | °C |

B2 Electrical Characteristics

Operating Temperature Range -20°C to +70°C

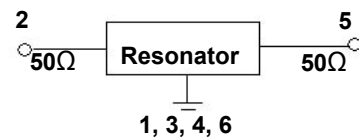
| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|----------------------------------|-------|-------|-----|--------|-----|-------------------|
| Center Frequency | f_c | | | 869.00 | | MHz |
| Insertion Loss, 868 to 870 MHz | IL | | | 2.3 | 3.0 | dB |
| Amplitude Ripple, 868 to 870 MHz | | | | 0.3 | 0.6 | dB _{p-p} |
| Attenuation Referenced to 0 dB: | | | | | | |
| 100 to 300 MHz | | | 45 | 50 | | dB |
| 300 to 845 MHz | | | 40 | 45 | | |
| 845 to 853 MHz | | | 38 | 43 | | |
| 879 to 883 MHz | | | 20 | 30 | | |
| 883 to 915 MHz | | | 40 | 45 | | |
| 915 to 945 MHz | | | 45 | 50 | | |
| 945 to 1200 MHz | | | 45 | 55 | | |
| 1200 to 2000 MHz | | | 35 | 40 | | |
| Source Impedance | Z_S | | | 50 | | Ω |
| Load Impedance | Z_L | | | 50 | | Ω |

| | | | |
|--|---|------------------|--|
| Case Style | SM3030-6 3.0 x 3.0 mm Nominal Footprint | | |
| Lid Symbolization, Y=year, WW=week, S=shift, Dot=pin 1 indicator | B16, <u>YWWS</u> | | |
| Standard Reel Quantity | Reel Size 7 Inch | 500 Pieces/Reel | |
| | Reel Size 13 Inch | 3000 Pieces/Reel | |

Electrical Connections

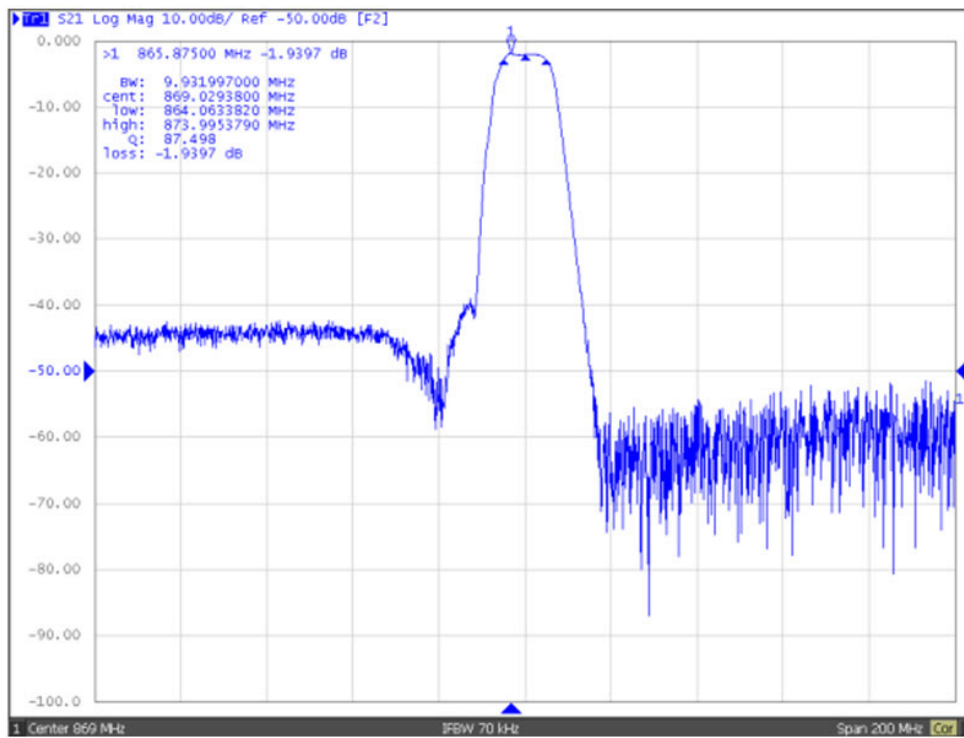
| Connection | Terminals |
|-----------------|------------|
| Port 1 (Input) | 2 |
| Port 2 (Output) | 5 |
| Case Ground | All others |

Test Circuit

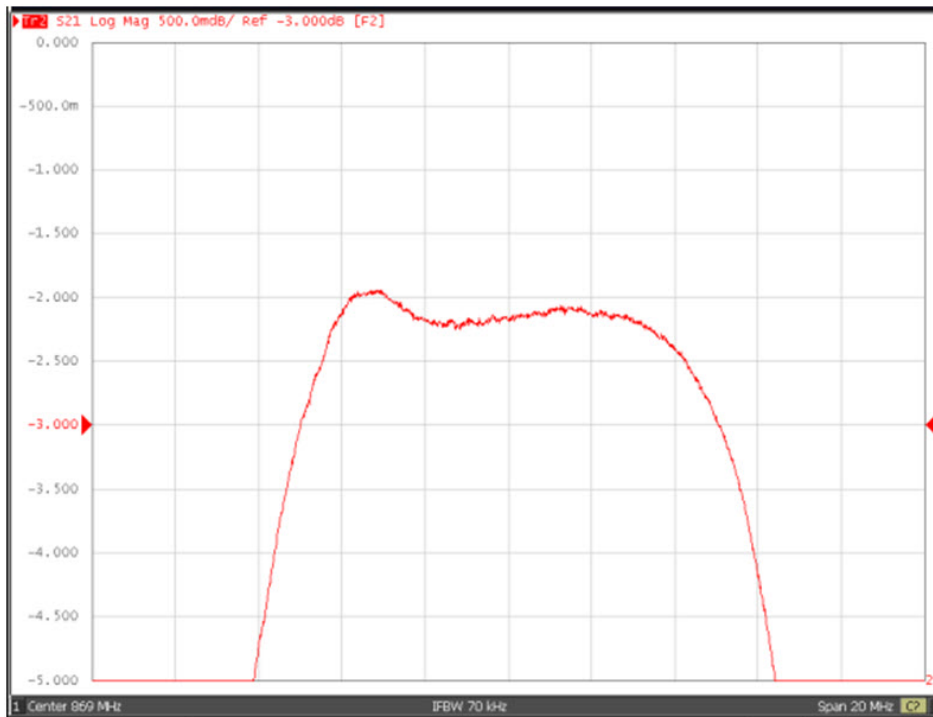


Frequency Characteristics

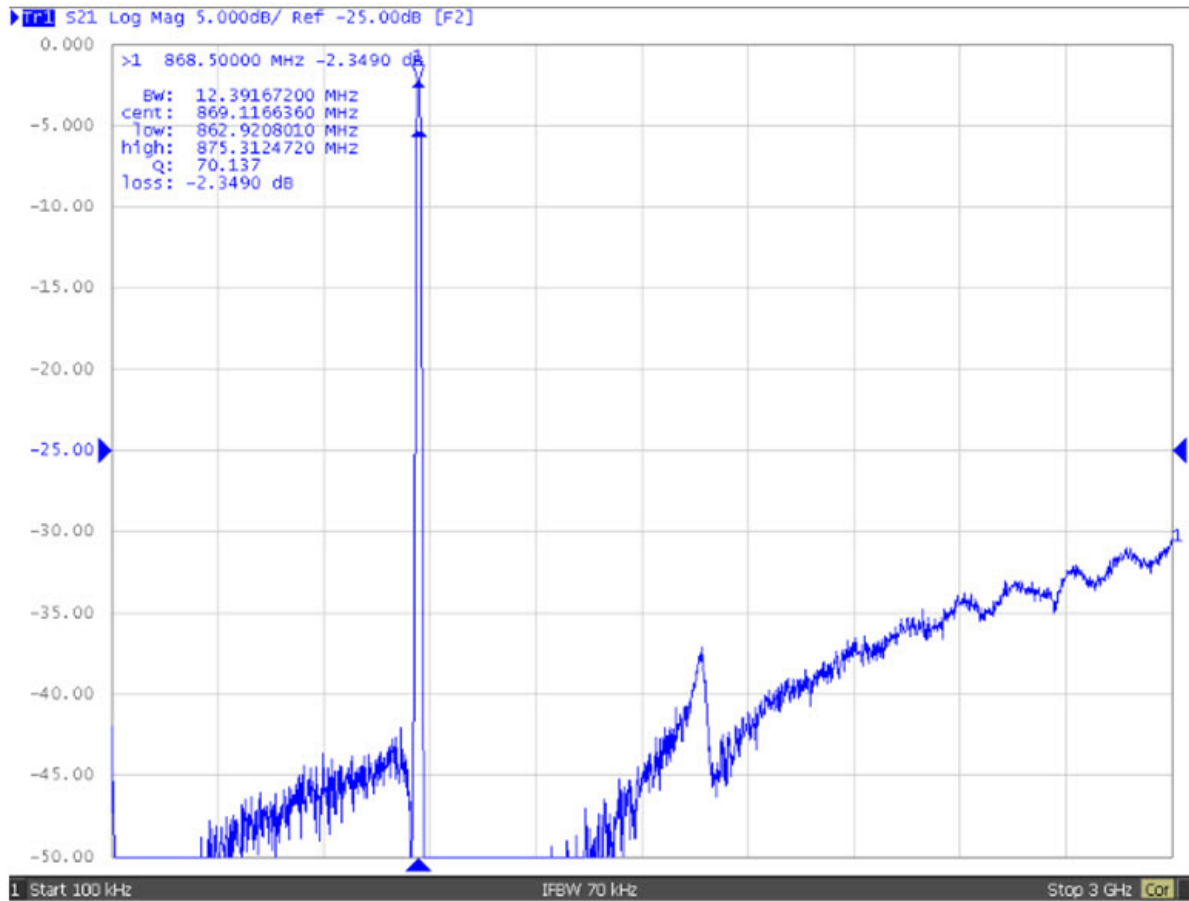
S21 Response: (Span 200 MHz)



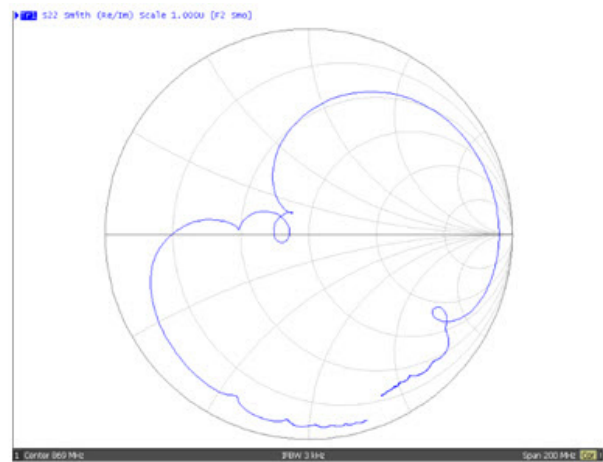
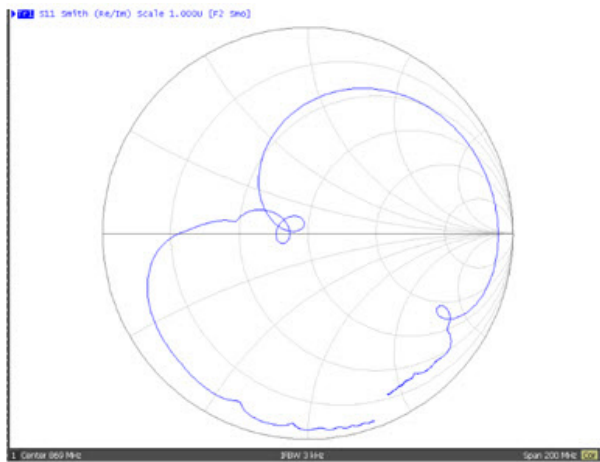
S21 Response: (Span 100 MHz)



S21 Response: (Span 100 MHz)

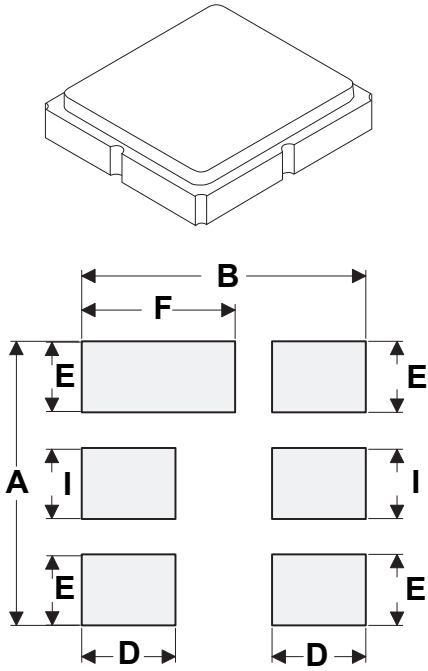


S11/S22 Response:



SM3030-6 Case

6-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



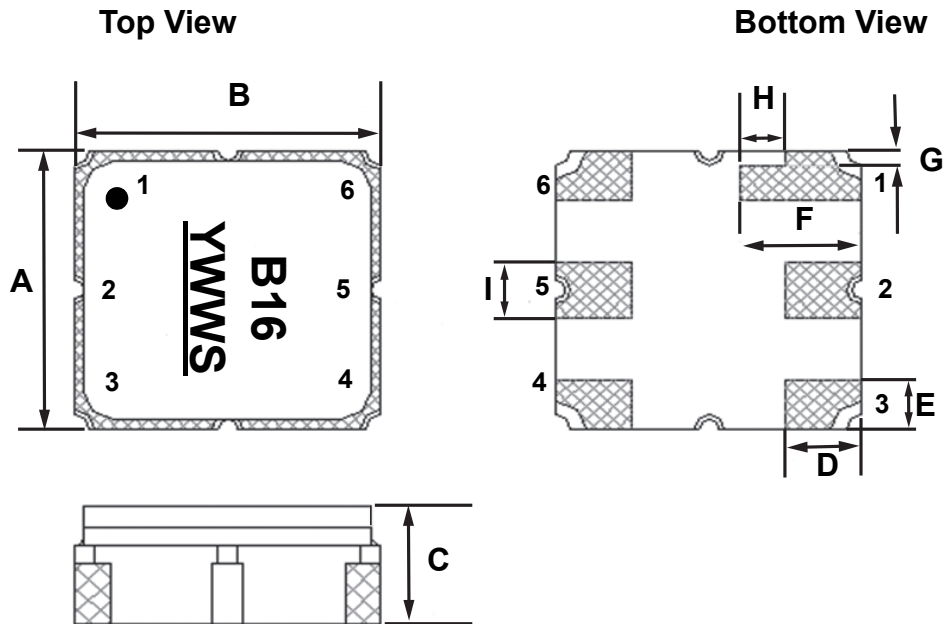
PCB Footprint Top View

Case and PCB Footprint Dimensions

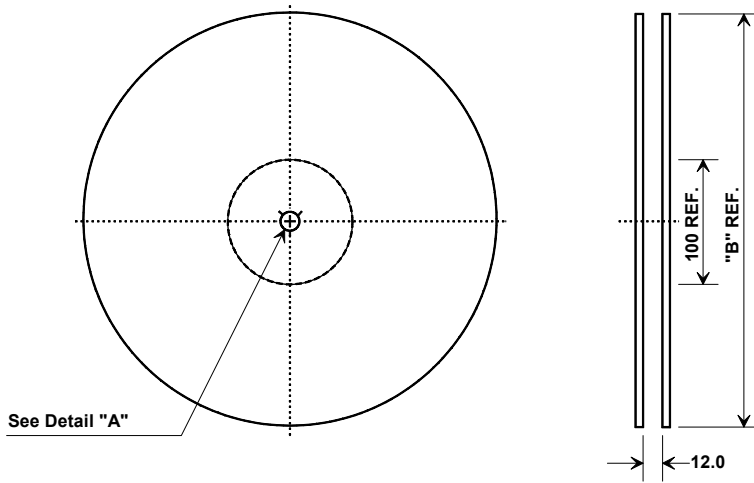
| Dimension | mm | | | Inches | | |
|-----------|------|------|------|--------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 2.85 | 3.00 | 3.15 | 0.112 | 0.118 | 0.124 |
| B | 2.85 | 3.00 | 3.15 | 0.112 | 0.118 | 0.124 |
| C | 1.12 | 1.25 | 1.40 | 0.044 | 0.049 | 0.055 |
| D | 0.60 | 0.75 | 0.90 | 0.023 | 0.029 | 0.035 |
| E | 0.38 | 0.53 | 0.68 | 0.014 | 0.020 | 0.026 |
| F | 1.05 | 1.20 | 1.35 | 0.041 | 0.047 | 0.053 |
| G | | 0.15 | | | 0.005 | |
| H | | 0.45 | | | 0.017 | |
| I | 0.55 | 0.60 | 0.65 | 0.021 | 0.023 | 0.025 |

Case Materials

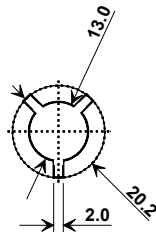
| Materials | |
|--------------------|--|
| Solder Pad Plating | 0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel |
| Lid Plating | 2.0 to 3.0 μ m Nickel |
| Body | Al ₂ O ₃ Ceramic |
| | Pb Free |



Tape and Reel Specifications

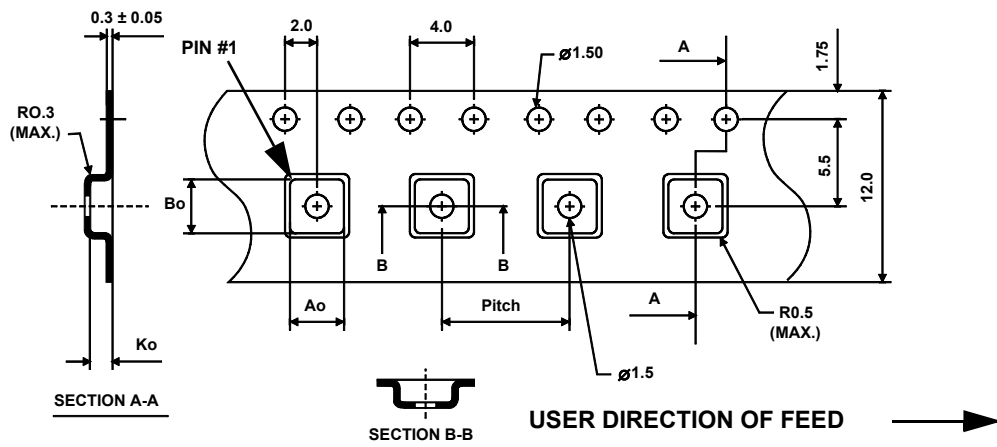


| "B" | | Quantity Per Reel |
|--------|-------------|-------------------|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 3000 |

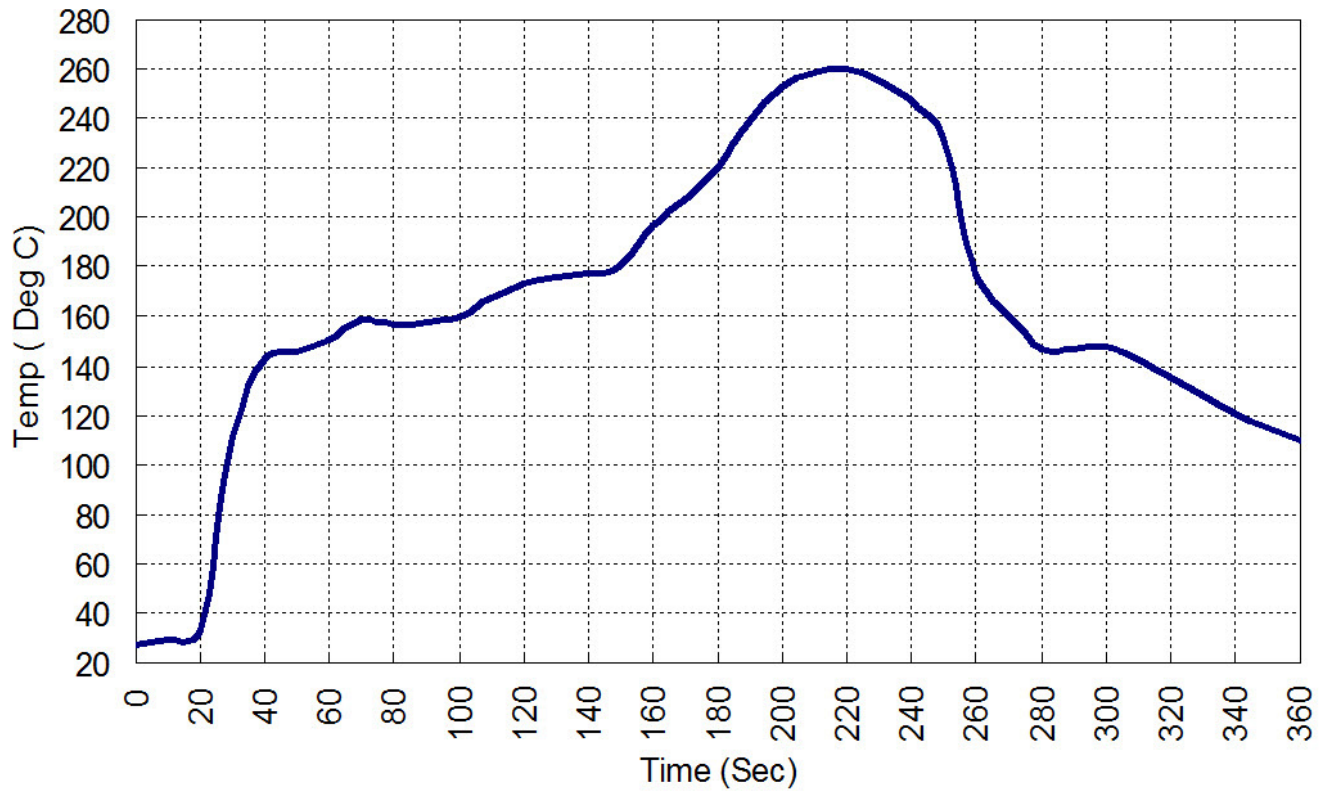


COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions | |
|-------------------------|---------|
| Ao | 4.25 mm |
| Bo | 4.25 mm |
| Ko | 1.30 mm |
| Pitch | 8.0 mm |
| W | 12.0 mm |



Typical Solder Reflow Profile





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.