

Features

- Combined Protection Technology (CPT) design
- Common mode filter
- ESD protection
- Fast response time
- Low capacitance
- RoHS compliant*



This series is currently available but not recommended for new designs.

ChipGuard® Model CGF0804TFH-R900-2L ESD/EMI Filter

Description

The Bourns® ChipGuard® CGF Series utilizes Combined Protection Technology (CPT) to create an ESD protection device and common mode filter in a single space-saving device. This series features very low capacitance and superior common mode noise rejection, making it ideal for use in high-speed differential data lines.

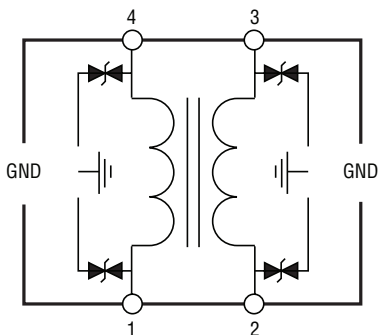
Absolute Maximum Ratings @ 25 °C (unless otherwise noted)

| Parameter | Symbol | Rating | Unit |
|----------------------------------|-----------|------------|------|
| Maximum DC Operating Voltage | V_{DC} | 5 | V |
| Maximum DC Operating Current | I_{DC} | 100 | mA |
| Operating Temperature Range | T_{OPR} | -40 to +85 | °C |
| Storage Temperature Range | T_{STG} | -40 to +85 | °C |
| ESD Protection per IEC 61000-4-2 | | | |
| Contact Discharge | | 8 | kV |
| Air Discharge | | 15 | |

Electrical Characteristics @ 25 °C (unless otherwise noted)

| Parameter | Min. | Typ. | Max. | Unit |
|--|------|------|-------|---------|
| Common Mode Impedance @ 100 MHz | 67.5 | 90 | 112.5 | Ohms |
| Cut-off Frequency | | 3 | | GHz |
| DC Resistance | 1.8 | 2.7 | 3.5 | Ohms |
| Insulation Resistance | 10 | | | Megohms |
| Capacitance @ 1 MHz, Any Pin to Ground | | 0.6 | | pF |
| Leakage Current @ 5 V, Any Pin to Ground | | | 1 | μA |

Circuit Diagram



How to Order

CG F 0804 TFH - R900 - 2L

ChipGuard®
 Product Designator
 Common Mode Filter Designator
 Package
 0804 = 0804 Size
 Technology
 TFH = Thin Film High-Speed
 Common Mode Impedance @ 100 MHz
 R900 = 90 Ohms
 Lines
 2L = 2 Lines

Environmental Characteristics

Moisture Sensitivity Level..... 1
 ESD Classification (HBM)..... 6

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WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

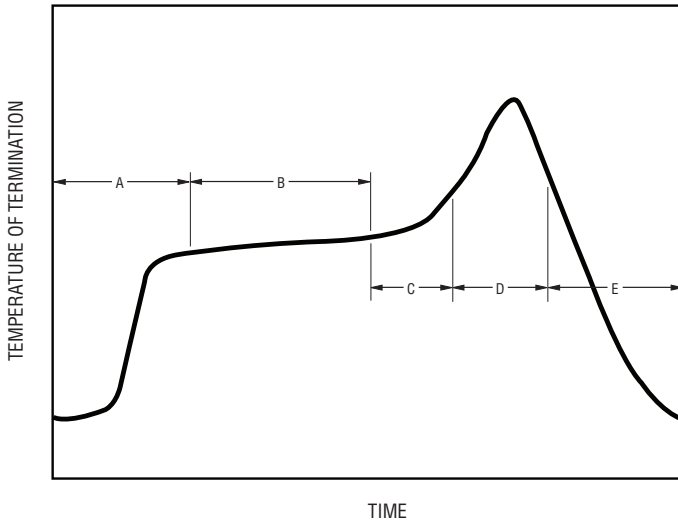
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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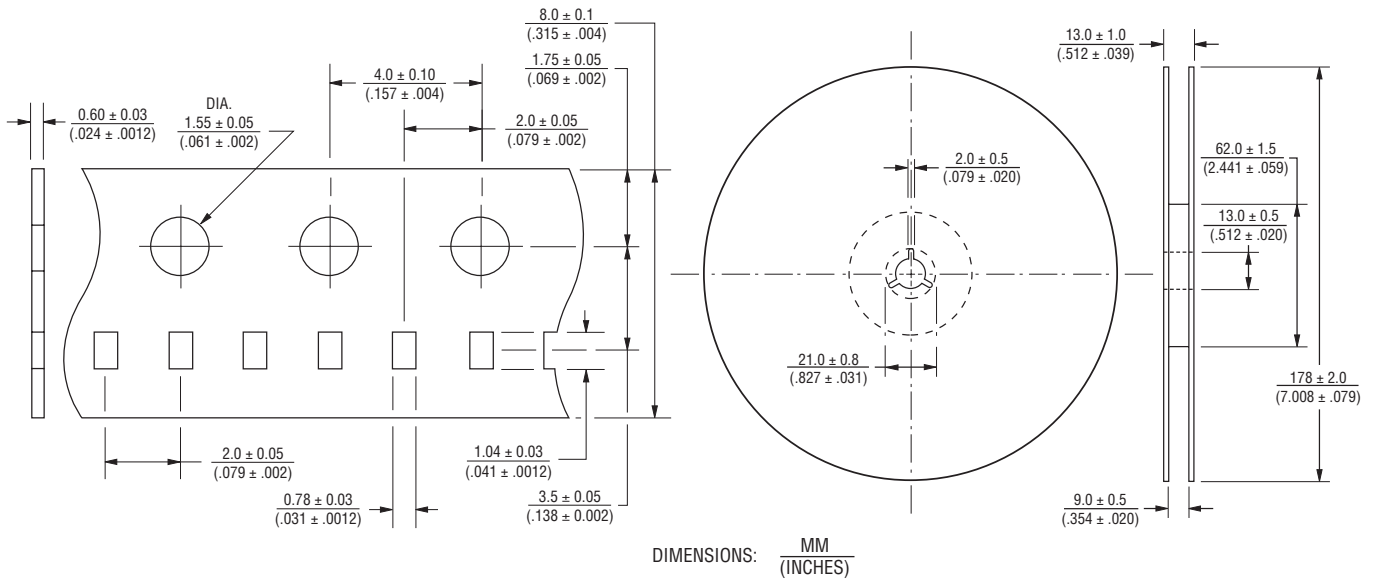
Solder Reflow Recommendations



| | | | |
|---|------------------------|---|---|
| A | 1st Rising Temperature | The Normal to Preheating Temperature | 30 s to 60 s |
| B | Preheating | 140 °C to 160 °C | 60 s to 120 s |
| C | 2nd Rising Temperature | Preheating to 200 °C | 20 s to 40 s |
| D | Main Heating | if 220 °C if 230 °C if 240 °C if 250 °C if 260 °C | 50 s ~ 60 s 40 s ~ 50 s 30 s ~ 40 s 20 s ~ 40 s 20 s ~ 40 s |
| E | Regular Cooling | 200 °C to 100 °C | 1 °C/s ~ 4 °C/s |

Per J-STD-020C

Packaging Dimensions



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

STANDARD = 10,000 pieces per reel

REV. B 01/20

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