



Features

- Two channels with choke
- Matched with Texas Instruments' Model BQ79606
- Operating temperature: -40 to +125 °C
- Hi-Pot: 4300 Vdc or 3100 Vrms
- Working voltage: 1600 Vdc
- RoHS compliant*

■ AEC-Q200 compliant

SM91509AL BMS Signal Transformer

Electrical Specifications @ 25 °C

OCL
(100 kHz, 0.1 V, (-40 °C ~ +125 °C))
..... 600 μH min.

Leakage Inductance (100 kHz, 0.1 V)
..... 0.5 μH max.

DCR
Cable Side..... 1.2 Ω max.
Chip Side..... 1.2 Ω max.

Turns Ratio..... 1:1 ±2 %

Insertion Loss
4 MHz.....-0.25 dB max.

Return Loss (Z out = 100 Ω)
4 MHz.....-22 dB min.

Cross Talk (Between each channel)
1-10 MHz.....-50 dB min.
10-100 MHz
..... -50+20*LOG₁₀ (f/10 MHz)

Common Mode Rejection Ratio
1~200 MHz.....-30 dB min.

Hi-Pot (1 mA, 60 sec.)
..... 4300 Vdc or 3100 Vrms

Design Construction Functional Insulation

Working Voltage 1600 Vdc

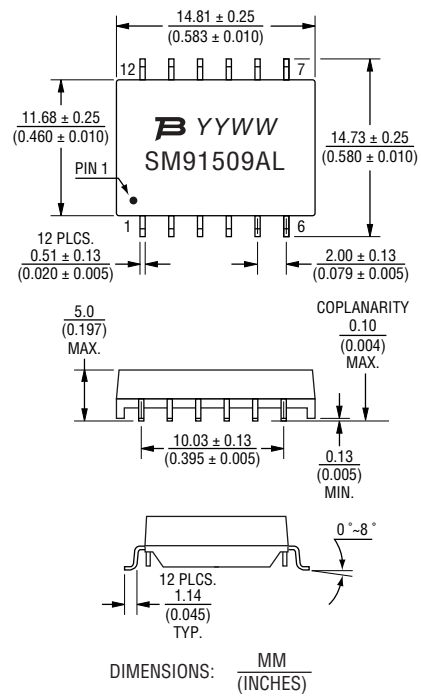
Operating Temperature.....-40 to +125 °C

Storage Temperature.....-50 to +125 °C

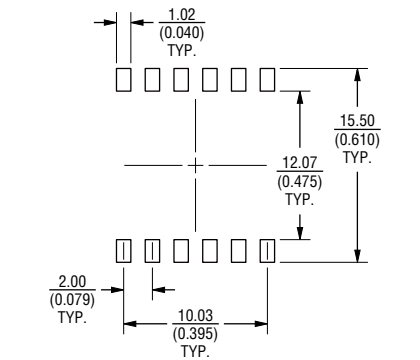
Moisture Sensitivity Level..... 1

ESD Classification (HBM)..... N/A

Product Dimensions



Recommended Layout



Packaging Specifications

Tape & Reel 400 pcs./reel

How To Order

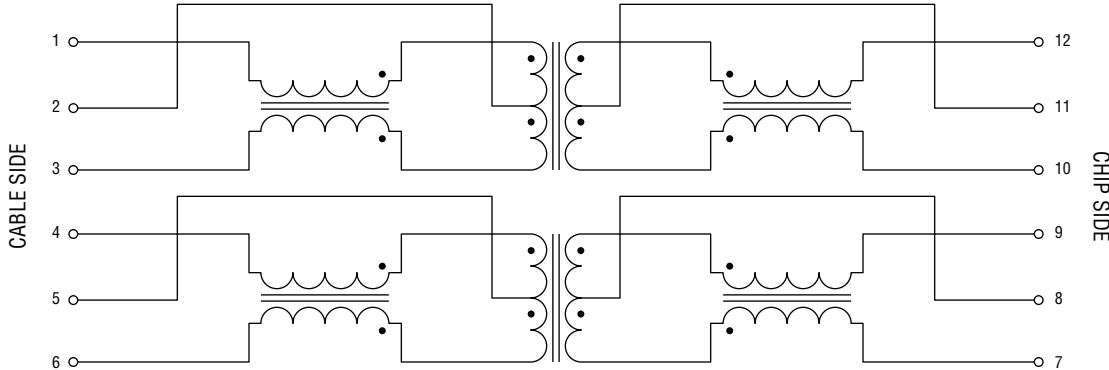
Model SM91509 A L - E

AEC-Q200 Compliant _____

Termination _____
L = RoHS Compliant

Packaging _____
E = Tape and Reel (400 pcs. per reel)

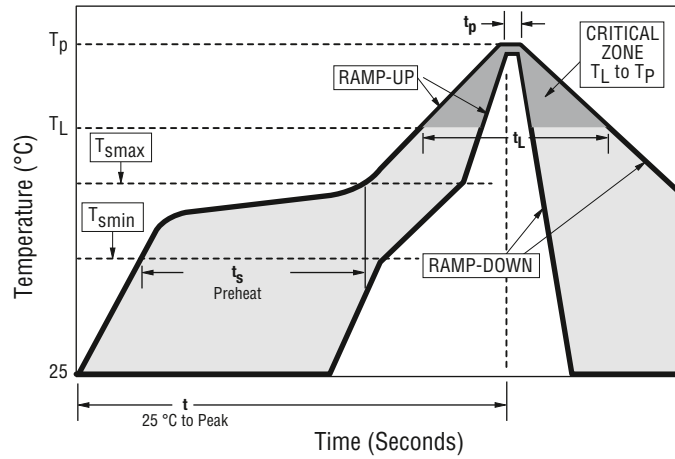
Electrical Schematic



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.
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Solder Profile



| Profile Features | Pb Free Assembly |
|--|------------------|
| Average Ramp-up Rate | 3 °C/second max. |
| Preheat | |
| Temperature min. (T_S min) | 150 °C |
| Temperature max. (T_S max) | 200 °C |
| Time (t_S min. to t_S max.) | 60 ~ 180 s |
| Liquidus Temperature: T_L | 217 °C |
| Time above Liquidus Temperature: t_L | 60 ~ 150 s |
| Peak Temperature: T_p | 245-250 °C |
| Time within 5 °C of Actual Peak Temperature: t_p | 20 ~ 40 s |
| Ramp-down Rate from Peak Temperature | 6 °C/s max. |
| Time 25 °C to Peak: $t_{TO\ PEAK}$ | 8 minutes max. |

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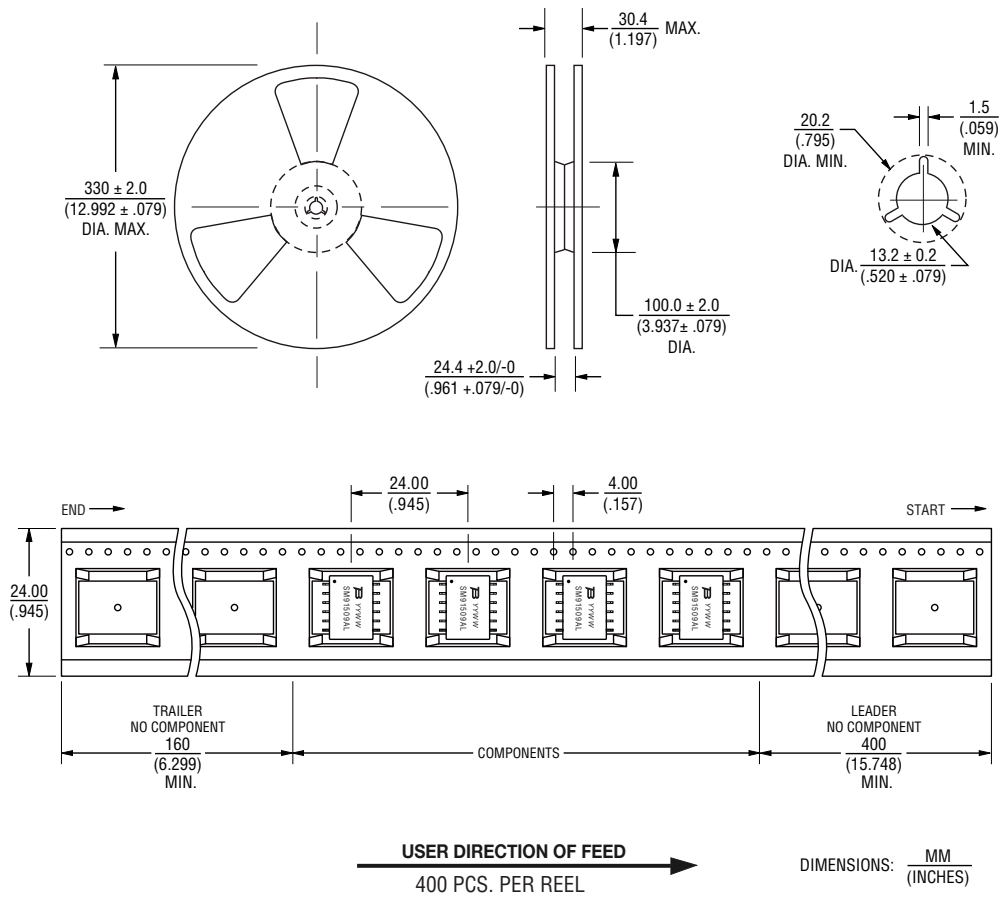
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SM91509AL BMS Signal Transformer

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Packaging Specifications

Specifications and tolerances comply with EIA-481 requirements.



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