

HDSM-541x/543x

0.56" (14.22mm)
Dual digit surface mount LED display



Data Sheet

Description

The HDSM-541x/543x is a dual digit display of 0.56" (14.22mm) height. This device utilizes AlInGaP / GaAs chips and has a grey top surface with white segments.

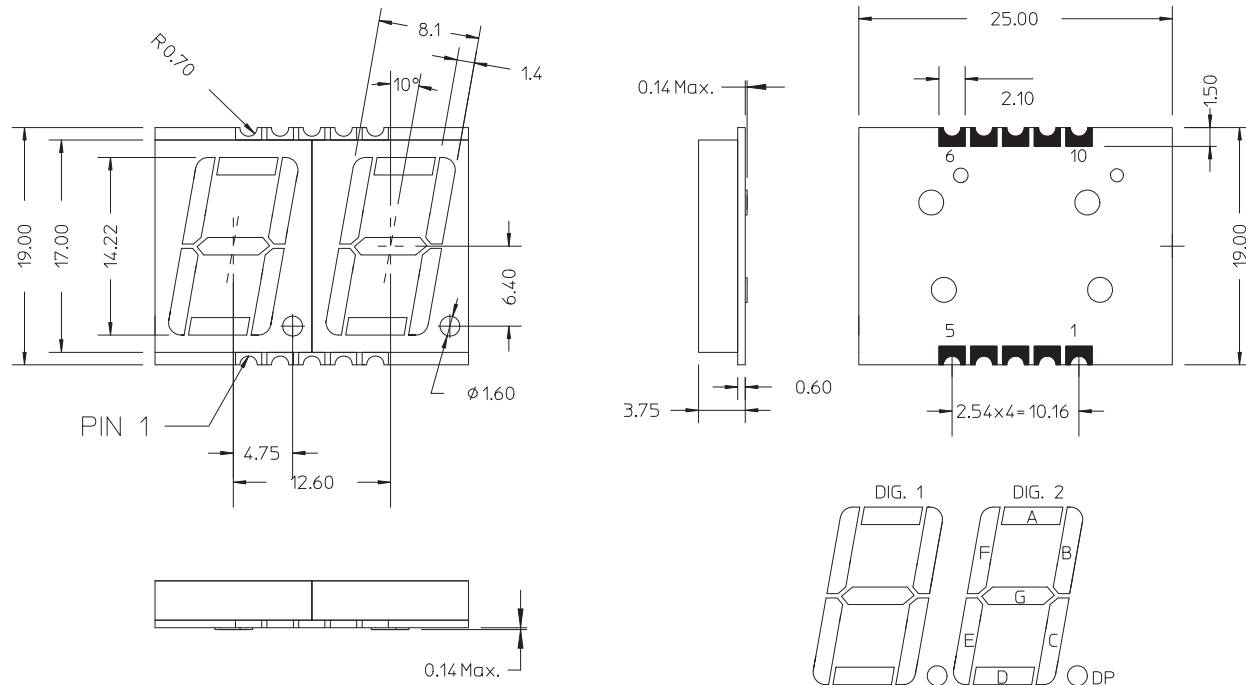
Features

- 0.56" digit height
- Low current operation
- Excellent characters appearance
- Available in CA and CC
- 500 pieces per reel
- Moisture sensitivity level: Level 3
- RoHS compliant

Ordering Information

| Red | Green | Yellow | Orange | Description |
|-----------|-----------|-----------|-----------|------------------------------------|
| HDSM-541C | HDSM-541H | HDSM-541F | HDSM-541L | Common Anode, Right Hand Decimal |
| HDSM-543C | HDSM-543H | HDSM-543F | HDSM-543L | Common Cathode, Right Hand Decimal |

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance are 0.25 mm (0.01") unless otherwise noted.

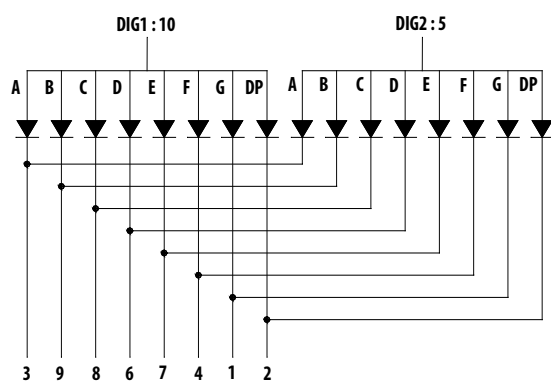
Pin Connection (Common Anode)

| PIN No | Connection |
|--------|-------------------|
| 1 | CATHODE G |
| 2 | CATHODE DP |
| 3 | CATHODE A |
| 4 | CATHODE F |
| 5 | COMMON ANODE DIG2 |
| 6 | CATHODE D |
| 7 | CATHODE E |
| 8 | CATHODE C |
| 9 | CATHODE B |
| 10 | COMMON ANODE DIG1 |

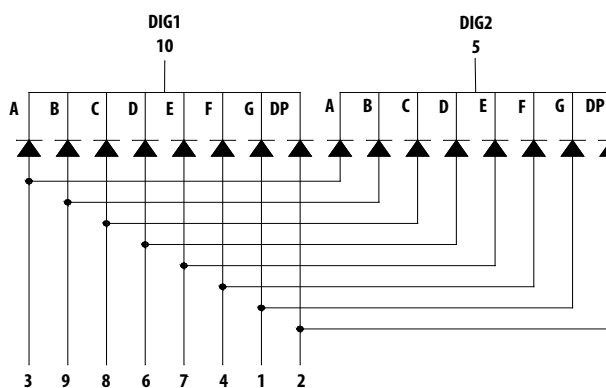
Pin Connection (Common Cathode)

| PIN No | Connection |
|--------|----------------------|
| 1 | ANODE G |
| 2 | ANODE DP |
| 3 | ANODE A |
| 4 | ANODE F |
| 5 | COMMON CATHODE DIG2 |
| 6 | ANODE D |
| 7 | ANODE E |
| 8 | ANODE C |
| 9 | ANODE B |
| 10 | COMMON CATHODE DIG 1 |

Internal Circuit Diagram (Common Anode)



Internal Circuit Diagram (Common Cathode)



Absolute Maximum Ratings @ $T_A=25^\circ$

| Parameter | Green/Yellow/Red/Orange | Unit |
|---|-------------------------|--------|
| Power Dissipation Per Segment | 65 | mW |
| Peak Forward Current Per Segment (1/10 Duty Cycle, .01ms pulse width) | 100 | mA |
| Continuous Forward Current Per Segment Derating Linearly From 25°C Per Segment | 25 | mA |
| Reverse Voltage Per Segment | 0.25 | mA/ °C |
| | 5 | V |
| Operating Temperature Range | -40°C to +105°C | |
| Storage Temperature Range | -40°C to +105°C | |

Electrical / Optical Characteristics @ T_A=25°C

Green

| Parameters | Symbol | Min | Typ | Max | Unit | Test Condition |
|-----------------------------------|--------------------------------|-----|---------|-----|------|-----------------------|
| Average Luminous Intensity | I _V | 5.4 | 10.5 | - | mcd | I _F = 10mA |
| Emissions Wavelength | λ _p /λ _d | - | 572/571 | - | nm | I _F = 20mA |
| Spectral Line Half-Width | Δλ | - | 20 | - | nm | I _F = 20mA |
| Forward Voltage, Per Segment | V _F | - | 2.1 | 2.6 | V | I _F = 20mA |
| Reverse Current, Per Segment | I _R | - | - | 100 | μA | V _R = 5V |
| Luminous Intensity Matching Ratio | I _{V-M} | - | - | 2:1 | - | I _F = 10mA |

Yellow

| Parameters | Symbol | Min | Typ | Max | Unit | Test Condition |
|-----------------------------------|--------------------------------|-----|---------|-----|------|-----------------------|
| Average Luminous Intensity | I _V | 8.6 | 20 | - | mcd | I _F = 10mA |
| Emissions Wavelength | λ _p /λ _d | - | 591/589 | - | nm | I _F = 20mA |
| Spectral Line Half-Width | Δλ | - | 15 | - | nm | I _F = 20mA |
| Forward Voltage, Per Segment | V _F | - | 2.1 | 2.6 | V | I _F = 20mA |
| Reverse Current, Per Segment | I _R | - | - | 100 | μA | V _R = 5V |
| Luminous Intensity Matching Ratio | I _{V-M} | - | - | 2:1 | - | I _F = 10mA |

Red

| Parameters | Symbol | Min | Typ | Max | Unit | Test Condition |
|-----------------------------------|--------------------------------|-----|---------|-----|------|-----------------------|
| Average Luminous Intensity | I _V | 8.6 | 16.0 | - | mcd | I _F = 10mA |
| Emissions Wavelength | λ _p /λ _d | - | 632/624 | - | nm | I _F = 20mA |
| Spectral Line Half-Width | Δλ | - | 20 | - | nm | I _F = 20mA |
| Forward Voltage, Per Segment | V _F | - | 2.0 | 2.6 | V | I _F = 20mA |
| Reverse Current, Per Segment | I _R | - | - | 100 | μA | V _R = 5V |
| Luminous Intensity Matching Ratio | I _{V-M} | - | - | 2:1 | - | I _F = 10mA |

Orange

| Parameters | Symbol | Min | Typ | Max | Unit | Test Condition |
|-----------------------------------|--------------------------------|-----|---------|-----|------|-----------------------|
| Average Luminous Intensity | I _V | 8.6 | 19.5 | - | mcd | I _F = 10mA |
| Emissions Wavelength | λ _p /λ _d | - | 611/605 | - | nm | I _F = 20mA |
| Spectral Line Half-Width | Δλ | - | 17 | - | nm | I _F = 20mA |
| Forward Voltage, Per Segment | V _F | - | 2.1 | 2.6 | V | I _F = 20mA |
| Reverse Current, Per Segment | I _R | - | - | 100 | μA | V _R = 5V |
| Luminous Intensity Matching Ratio | I _{V-M} | - | - | 2:1 | - | I _F = 10mA |

Typical Electrical / Optical characteristic curves @ $T_A=25^\circ\text{C}$

Green

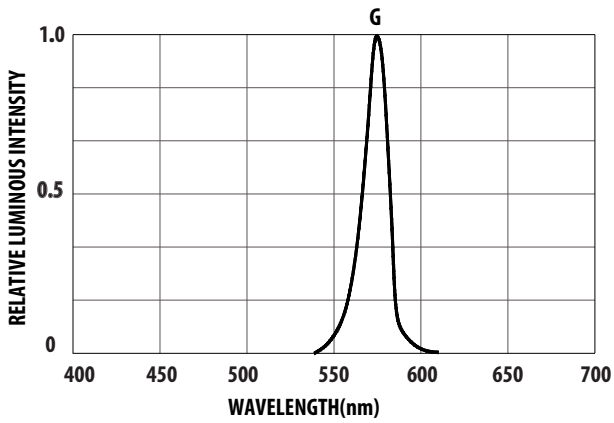


Figure 1. Relative Luminous Intensity vs. Wavelength

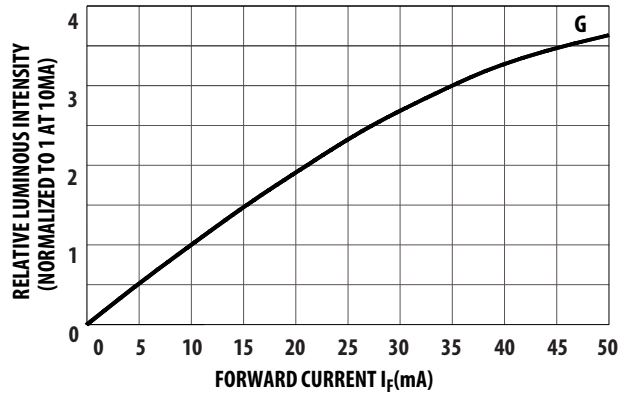


Figure 2. Relative Luminous Intensity vs. Forward Current

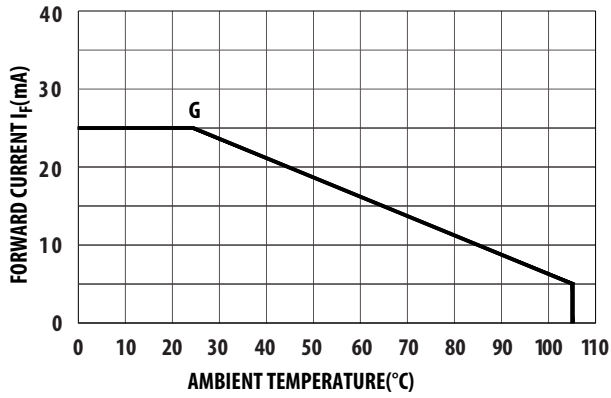


Figure 3. Allowable DC Current vs. Ambient Temperature

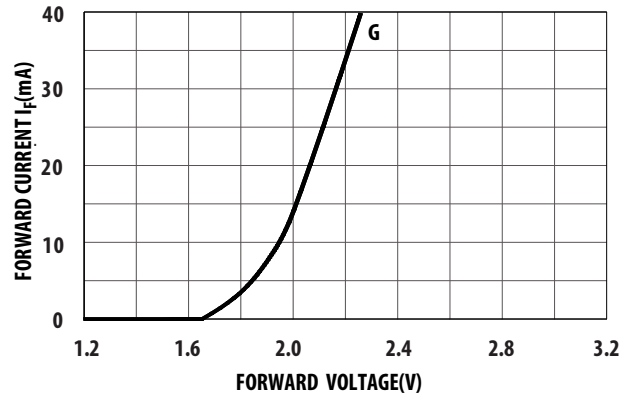


Figure 4. Forward Current vs. Forward Voltage

Yellow

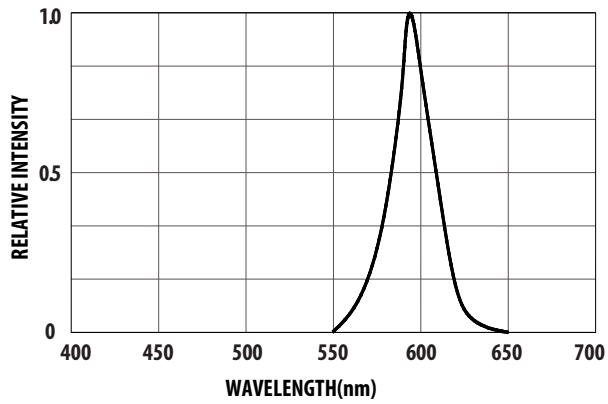


Figure 1. Relative Intensity vs. Wavelength

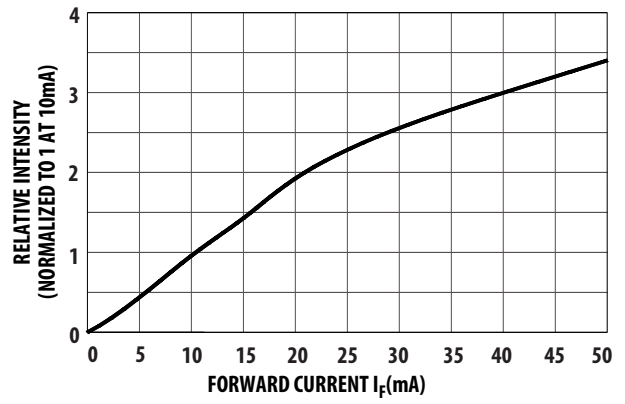


Figure 2. Relative Intensity vs. Forward Current

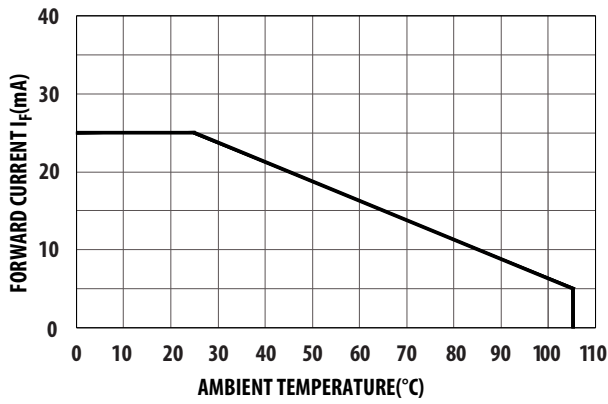


Figure 3. Allowable DC Current vs. Ambient Temperature

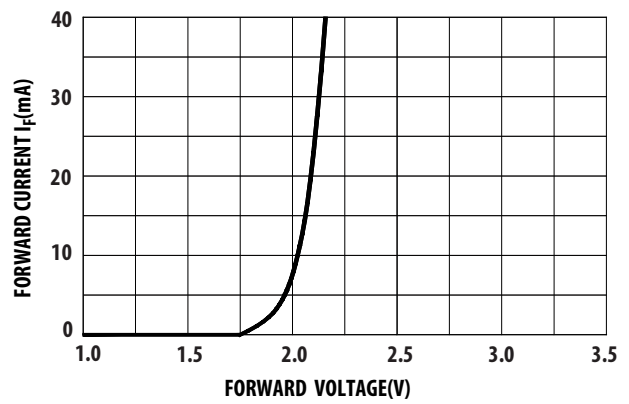


Figure 4. Forward Current vs. Forward Voltage

Red

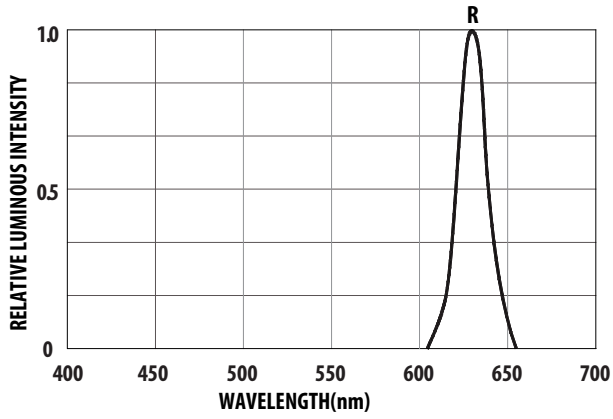


Figure 1. Relative Luminous Intensity vs. Wavelength

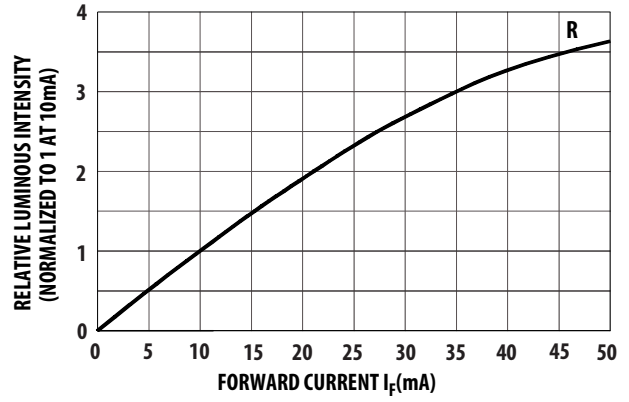


Figure 2. Relative Luminous Intensity vs. Forward Current

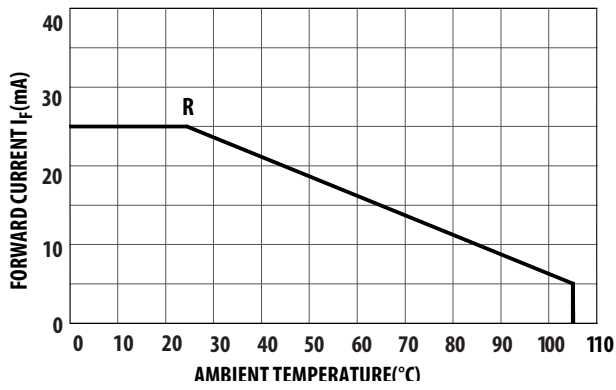


Figure 3. Allowable DC Current vs. Ambient Temperature

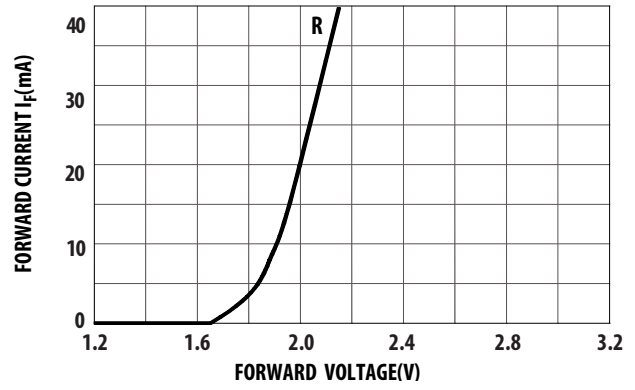


Figure 4. Forward Current vs. Forward Voltage

Orange

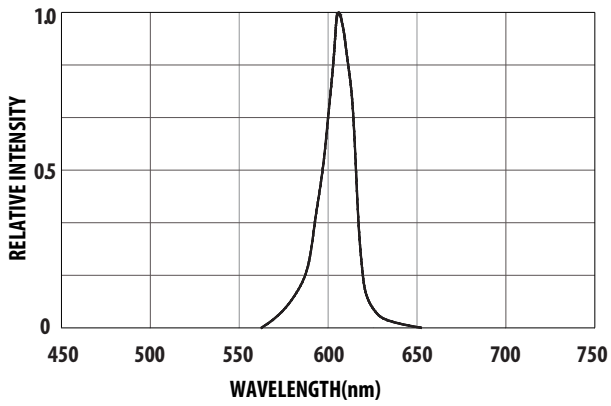


Figure 1. Relative Intensity vs. Wavelength

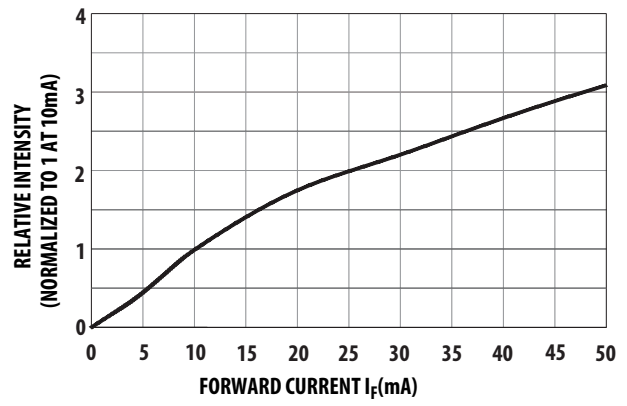


Figure 2. Relative Intensity vs. Forward Current

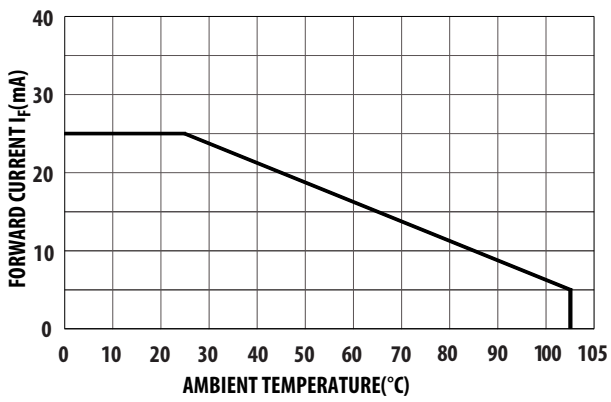


Figure 3. Allowable DC Current vs. Ambient Temperature

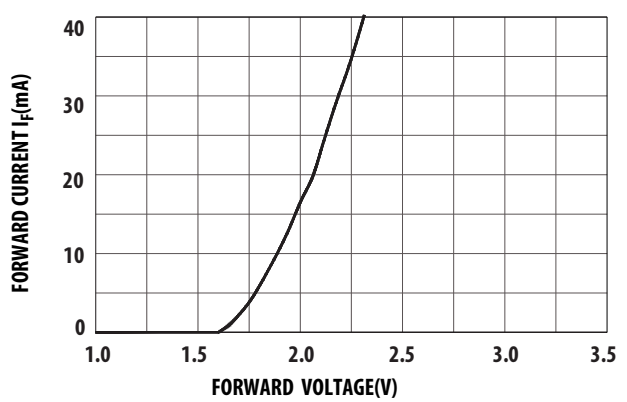


Figure 4. Forward Current vs. Forward Voltage

Intensity Bin Limits (mcd)

Green

| IV Bin Category | Min. | Max |
|-----------------|--------|--------|
| M | 5.401 | 8.600 |
| N | 8.601 | 13.700 |
| P | 13.701 | 21.800 |
| Q | 21.801 | 34.700 |

Tolerance: ±15%

Yellow / Red / Orange

| IV Bin Category | Min. | Max |
|-----------------|--------|--------|
| N | 8.601 | 13.700 |
| P | 13.701 | 21.800 |
| Q | 21.801 | 34.700 |
| R | 34.701 | 55.200 |

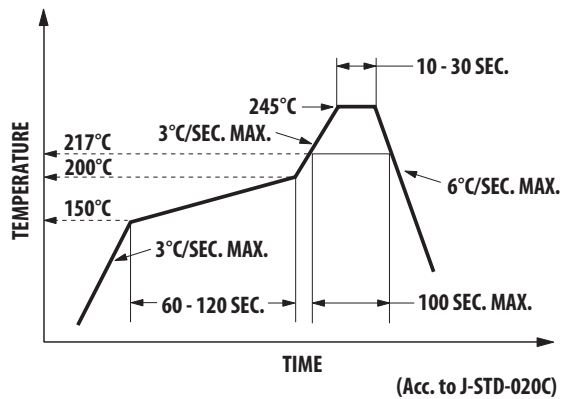
Tolerance: ±15%

Note:

- Bin categories are established for classification of products. Products may not be available in all categories. Please contact your Avago representative for information on currently available bins.

SMT Soldering Profile

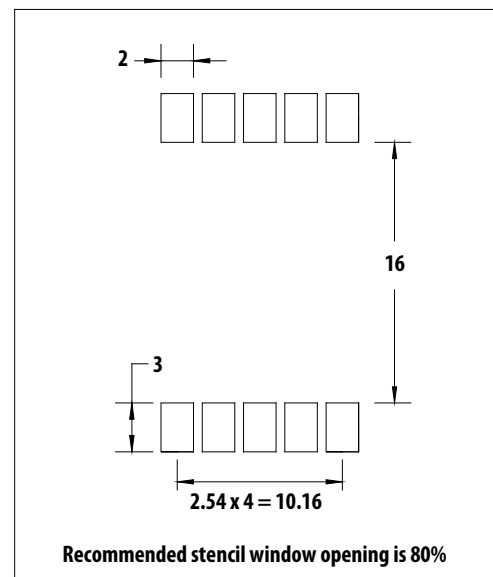
Pb free reflow soldering Profile



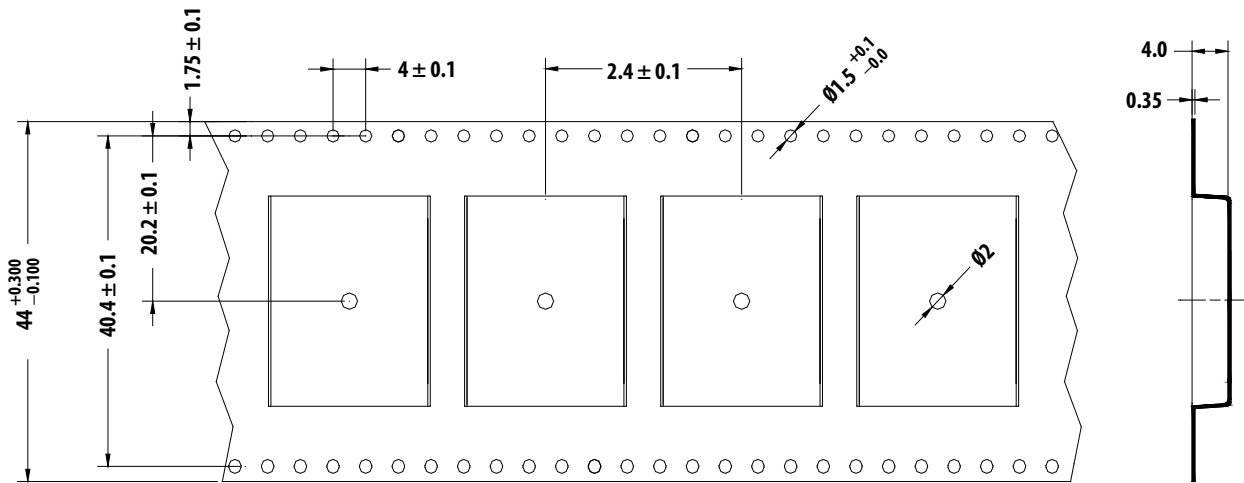
Notes:

- The peak temperature refers to the peak package body temperature.
- Number of reflow process shall be limited to maximum 2 times only. Cooling process to normal temperature is required between first and second soldering process.

Recommended soldering pattern (unit: mm)



Tape specification (unit: mm)



For product information and a complete list of distributors, please go to our web site: www.avagotech.com

Avago, Avago Technologies, and the A logo are trademarks of Avago Technologies in the United States and other countries. Data subject to change. Copyright © 2005-2011 Avago Technologies. All rights reserved. AV02-0983EN - March 17, 2011



Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9