

IMH20TR1G

Dual Bias Resistor Transistor

NPN Surface Mount

- Low V_{CC} (sat) 80 mV max at $I_C/I_B = 50$ mA/2.5 mA
- High Current: $I_C = 600$ mA max
- This is a Pb-Free Device

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

| Rating | Symbol | Value | Unit |
|--------------------------------|---------------|-------|------|
| Collector-Base Voltage | $V_{(BR)CBO}$ | 30 | Vdc |
| Collector-Emitter Voltage | $V_{(BR)CEO}$ | 15 | Vdc |
| Emitter-Base Voltage | $V_{(BR)EBO}$ | 5.0 | Vdc |
| Collector Current - Continuous | I_C | 600 | mAdc |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|----------------------|-----------|-------------|------------------|
| Power Dissipation* | P_D | 300 | mW |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

*Total for both Transistors.

Q1 + Q2: NPN

ELECTRICAL CHARACTERISTICS

($T_A = 25^\circ\text{C}$ unless otherwise noted)

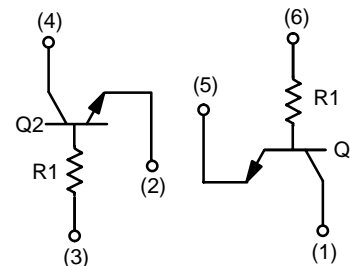
| Characteristic | Symbol | Min | Max | Unit |
|--|---------------|------|------|------------|
| Collector-Emitter Breakdown Voltage ($I_C = 1.0$ mAdc, $I_B = 0$) | $V_{(BR)CEO}$ | 15 | - | Vdc |
| Collector-Base Breakdown Voltage ($I_C = 50$ μ Adc, $I_E = 0$) | $V_{(BR)CBO}$ | 30 | - | Vdc |
| Emitter-Base Breakdown Voltage ($I_E = 50$ μ Adc, $I_C = 0$) | $V_{(BR)EBO}$ | 5.0 | - | Vdc |
| Collector-Base Cutoff Current ($V_{CB} = 20$ Vdc, $I_E = 0$) | I_{CBO} | - | 0.5 | μ Adc |
| Emitter-Base Cutoff Current ($V_{EB} = 4.0$ V, $I_C = 0$) | I_{EBO} | - | 0.5 | μ Adc |
| DC Current Gain (Note 1) ($V_{CE} = 5.0$ Vdc, $I_C = 50$ mAdc) | h_{FE} | 100 | 600 | - |
| Collector-Emitter Saturation Voltage ($I_C = 50$ mAdc, $I_B = 2.5$ mAdc) | $V_{CE(sat)}$ | - | 80 | mV |
| Input Resistance | R_1 | 1.54 | 2.86 | k Ω |

1. Pulse Test: Pulse Width ≤ 300 μ s, D.C. $\leq 2\%$.



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<http://onsemi.com>

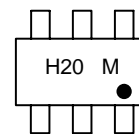


SC-74



SC-74R
318AA
Style 21

MARKING DIAGRAM



H20 = Specific Device Code
M = Date Code

ORDERING INFORMATION

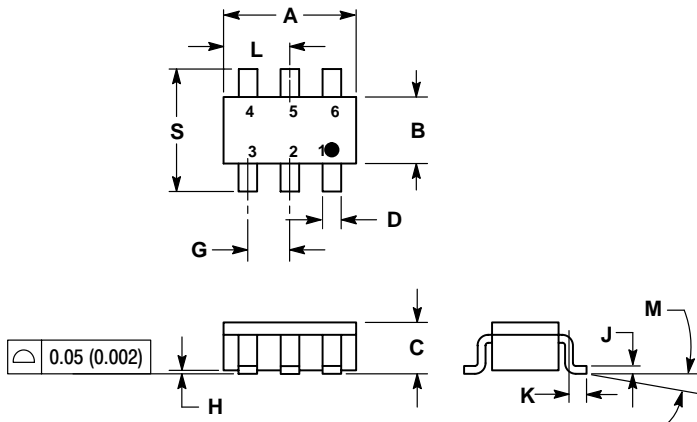
| Device | Package | Shipping† |
|-----------|---------|------------------|
| IMH20TR1G | SC-74R | 3000/Tape & Reel |

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

IMH20TR1G

PACKAGE DIMENSIONS

SC-74R
CASE 318AA-01
ISSUE A



NOTES:

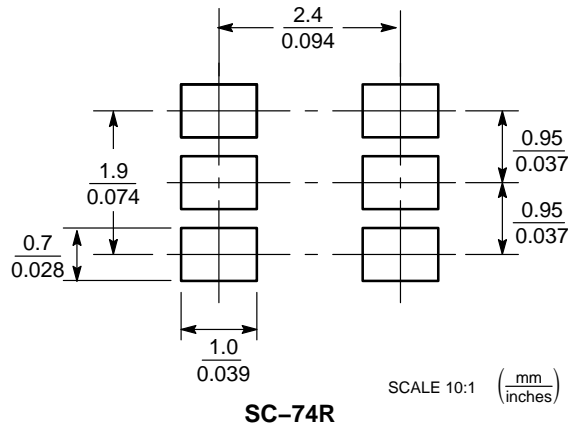
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

| DIM | INCHES | | MILLIMETERS | |
|-----|--------|--------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.1142 | 0.1220 | 2.90 | 3.10 |
| B | 0.0512 | 0.0669 | 1.30 | 1.70 |
| C | 0.0354 | 0.0433 | 0.90 | 1.10 |
| D | 0.0098 | 0.0197 | 0.25 | 0.50 |
| G | 0.0335 | 0.0413 | 0.85 | 1.05 |
| H | 0.0005 | 0.0040 | 0.013 | 0.100 |
| J | 0.0040 | 0.0102 | 0.10 | 0.26 |
| K | 0.0079 | 0.0236 | 0.20 | 0.60 |
| L | 0.0493 | 0.0649 | 1.25 | 1.65 |
| M | 0° | 10° | 0° | 10° |
| S | 0.0985 | 0.1181 | 2.50 | 3.00 |

STYLE 21:

- PIN 1. COLLECTOR 1
- EMITTER 2
- BASE 2
- COLLECTOR 2
- EMITTER 1
- BASE 1

SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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