# IMH20TR1G

## Dual Bias Resistor Transistor

## **NPN Surface Mount**

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

### **MAXIMUM RATINGS** (T<sub>A</sub> = $25^{\circ}$ C)

Rating	Symbol	Value	Unit
Collector-Base Voltage	V <sub>(BR)CBO</sub>	30	Vdc
Collector-Emitter Voltage	V <sub>(BR)CEO</sub>	15	Vdc
Emitter-Base Voltage	V <sub>(BR)EBO</sub>	5.0	Vdc
Collector Current – Continuous	Ι <sub>C</sub>	600	mAdc

#### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Power Dissipation*	PD	300	mW
Junction Temperature	TJ	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

\*Total for both Transistors.

### Q1 + Q2: NPN

### ELECTRICAL CHARACTERISTICS

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

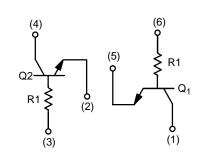
Characteristic	Symbol	Min	Max	Unit
Collector–Emitter Breakdown Voltage $(I_{C} = 1.0 \text{ mAdc}, I_{B} = 0)$	V <sub>(BR)CEO</sub>	15	-	Vdc
Collector–Base Breakdown Voltage ( $I_C = 50 \ \mu Adc$ , $I_E = 0$ )	V <sub>(BR)CBO</sub>	30	-	Vdc
Emitter–Base Breakdown Voltage ( $I_E = 50 \ \mu Adc$ , $I_C = 0$ )	V <sub>(BR)EBO</sub>	5.0	-	Vdc
Collector–Base Cutoff Current ( $V_{CB} = 20 \text{ Vdc}, I_E = 0$ )	I <sub>CBO</sub>	-	0.5	μAdc
Emitter–Base Cutoff Current ( $V_{EB}$ = 4.0 V, I <sub>C</sub> = 0)	I <sub>EBO</sub>	-	0.5	μAdc
DC Current Gain (Note 1) ( $V_{CE} = 5.0$ Vdc, $I_C = 50$ mAdc)	h <sub>FE</sub>	100	600	-
Collector–Emitter Saturation Voltage ( $I_C = 50$ mAdc, $I_B = 2.5$ mAdc)	V <sub>CE(sat)</sub>	-	80	mV
Input Resistance	R <sub>1</sub>	1.54	2.86	kΩ

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



### ON Semiconductor®

http://onsemi.com



SC-74



**318AA** Style 21



MARKING

DIAGRAM

H20 = Specific Device Code M = Date Code

#### **ORDERING INFORMATION**

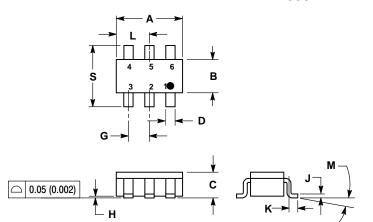
	Device	Package	Shipping <sup>†</sup>
IM	H20TR1G	SC-74R	3000/Tape & Reel

<sup>†</sup>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

3.

DIMENSIONING AND TOLERANCING PER 1.

ANSI Y14.5M, 1982. CONTROLLING DIMENSION: INCH

MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

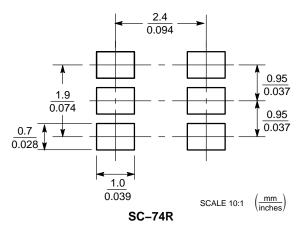
	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
Α	0.1142	0.1220	2.90	3.10
В	0.0512	0.0669	1.30	1.70
С	0.0354	0.0433	0.90	1.10
D	0.0098	0.0197	0.25	0.50
G	0.0335	0.0413	0.85	1.05
н	0.0005	0.0040	0.013	0.100
J	0.0040	0.0102	0.10	0.26
K	0.0079	0.0236	0.20	0.60
L	0.0493	0.0649	1.25	1.65
М	0 °	10°	0 °	10°
S	0.0985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

STYLE 21: PIN 1. COLLECTOR 1 2. EMITTER 2

3. BASE 2 4. COLLECTOR 2 5. EMITTER 1

6. 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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