

# 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)

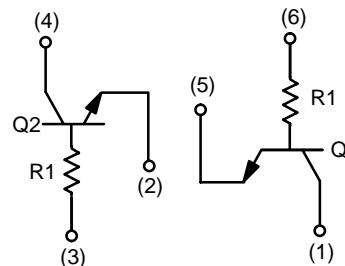
Characteristic	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage ( $I_C = 1.0$ mAdc, $I_E = 0$ )	$V_{(BR)CEO}$	15	-	Vdc
Collector-Base Breakdown Voltage ( $I_C = 50$ $\mu$ Adc, $I_E = 0$ )	$V_{(BR)CBO}$	30	-	Vdc
Emitter-Base Breakdown Voltage ( $I_E = 50$ $\mu$ Adc, $I_C = 0$ )	$V_{(BR)EBO}$	5.0	-	Vdc
Collector-Base Cutoff Current ( $V_{CB} = 20$ Vdc, $I_E = 0$ )	$I_{CBO}$	-	0.5	$\mu$ Adc
Emitter-Base Cutoff Current ( $V_{EB} = 4.0$ V, $I_C = 0$ )	$I_{EBO}$	-	0.5	$\mu$ 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 $\Omega$

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



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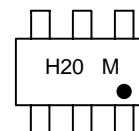


SC-74



SC-74R  
318AA  
Style 21

#### MARKING DIAGRAM



H20 = Specific Device Code  
M = Date Code

#### ORDERING INFORMATION

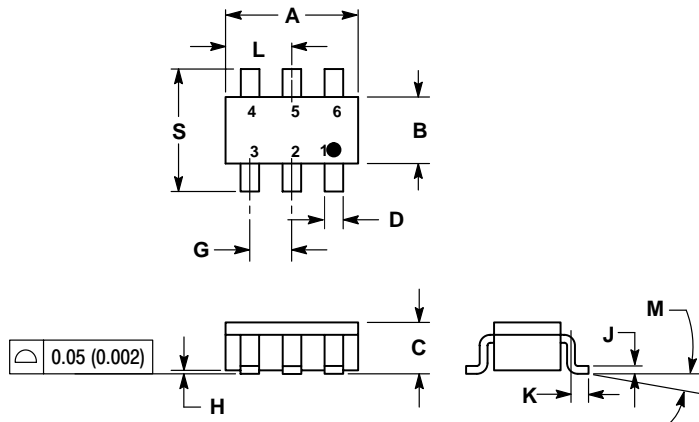
Device	Package	Shipping†
IMH20TR1G	SC-74R	3000/Tape & Reel

†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:

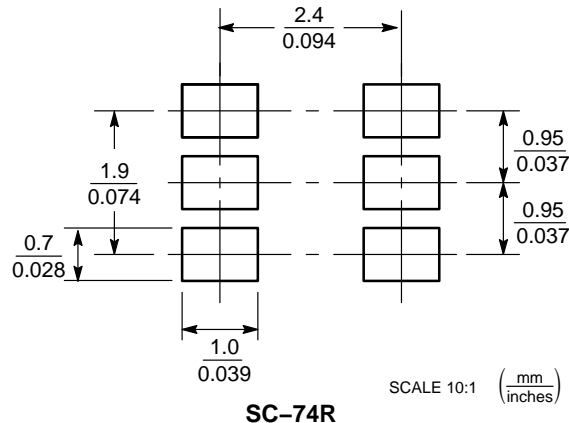
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

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

## SOLDERING FOOTPRINT\*



**SC-74R**

\*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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**IMH20TR1G/D**