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 mA max
- This is a Pb−Free Device

MAXIMUM RATINGS (T_A = 25°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	°C
Storage Temperature	T_{stg}	−55 to +150	°C

*Total for both Transistors.

Q1 + Q2: NPN

ELECTRICAL CHARACTERISTICS

(T_A = 25°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 μAdc, I_E = 0)	$V_{(BR)CBO}$	30	−	Vdc
Emitter−Base Breakdown Voltage (I_E = 50 μAdc, I_C = 0)	$V_{(BR)EBO}$	5.0	−	Vdc
Collector−Base Cutoff Current (V_{CB} = 20 Vdc, I_E = 0)	I_{CBO}	−	0.5	μAdc
Emitter−Base Cutoff Current (V_{EB} = 4.0 V, I_C = 0)	I_{EBO}	−	0.5	μAdc
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	kΩ

1. Pulse Test: Pulse Width ≤ 300 μs, D.C. ≤ 2%.

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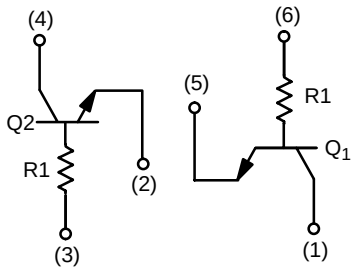
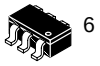
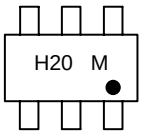


SC−74



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.

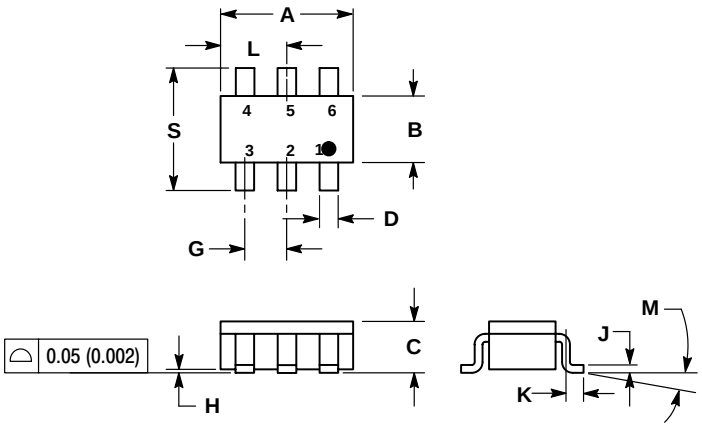
January, 2004 − Rev. 0

Publication Order Number:
IMH20TR1G/D

IMH20TR1G

PACKAGE DIMENSIONS

SC−74R
CASE 318AA−01
ISSUE A

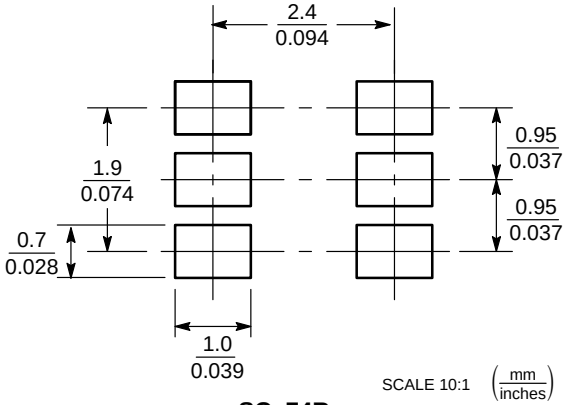


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

	INCHES		MILLIMETERS	
DIM	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.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
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ON Semiconductor Website: http://onsemi.com

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For additional information, please contact your local Sales Representative.