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

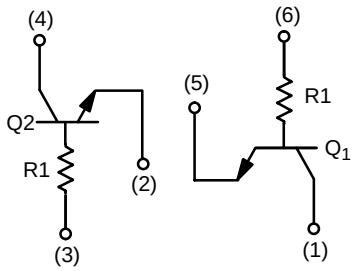
(T_A = 25°C unless otherwise noted)

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

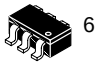
1. Pulse Test: Pulse Width ≤ 300 μs, D.C. ≤ 2%.

ON Semiconductor®

http://onsemi.com

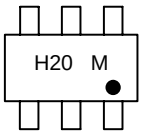


SC−74



SC−74R
318AA
Style 21

MARKING DIAGRAM



H20 = Specific Device Code
M = Date Code

ORDERING INFORMATION

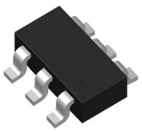
Device	Package	Shipping†
IMH20TR1G	SC−74R	3000/Tape & Reel

†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.

January, 2004 − Rev. 0

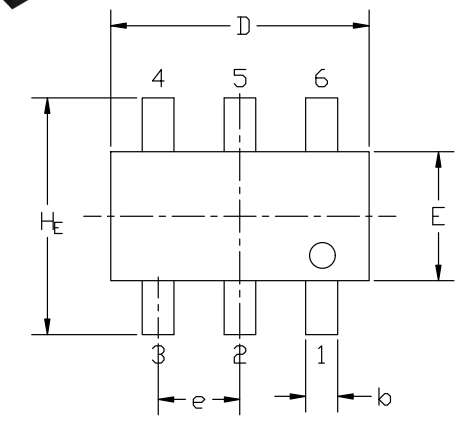
Publication Order Number:
IMH20TR1G/D

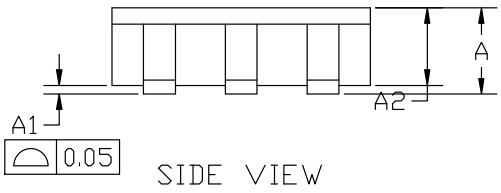
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

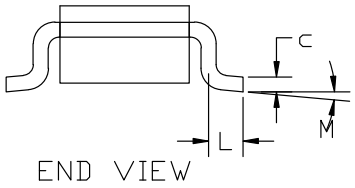


SC74−6 3.00x1.50x0.90, 0.95P
CASE 318AA
ISSUE C

DATE 22 AUG 2023



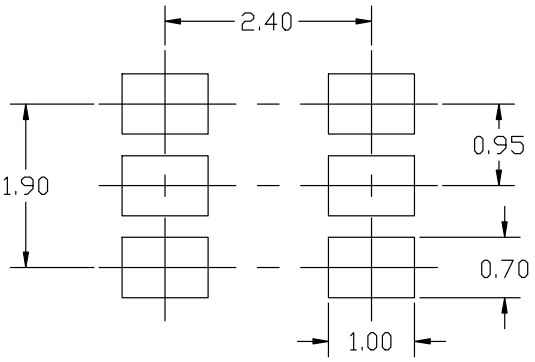




NOTES:

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

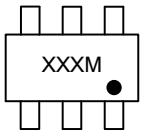
	MILLIMETERS		
DIM	MIN.	NOM.	MAX.
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
A2	0.80	0.90	1.00
b	0.25	0.37	0.50
c	0.10	0.18	0.26
D	2.90	3.00	3.10
E	1.30	1.50	1.70
e	0.85	0.95	1.05
L	0.20	0.40	0.60
H_E	2.50	2.75	3.00
M	0°	–	10°



RECOMMENDED
MOUNTING 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.

GENERIC MARKING DIAGRAM*



XXX = Specific Device Code
M = Date Code
▪ = Pb−Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “▪”, may or may not be present. Some products may not follow the Generic Marking.

STYLE 20:
PIN 1. COLLECTOR 1
2. BASE 2
3. EMITTER 2
4. COLLECTOR 2
5. BASE 1
6. EMITTER 1

STYLE 21:
PIN 1. COLLECTOR 1
2. EMITTER 2
3. BASE 2
4. COLLECTOR 2
5. EMITTER 1
6. BASE 1

DOCUMENT NUMBER:	**98AON13505D**	Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped “CONTROLLED COPY” in red.
DESCRIPTION:	**SC74−6 3.00x1.50x0.90, 0.95P**	**PAGE 1 OF 1**

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:
Technical Library: www.onsemi.com/design/resources/technical−documentation
onsemi Website: www.onsemi.com

ONLINE SUPPORT: www.onsemi.com/support
For additional information, please contact your local Sales Representative at www.onsemi.com/support/sales