

Dual Bias Resistor Transistor

NPN Surface Mount

IMH20TR1G

- 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.

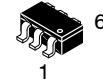
Q1 + Q2: NPN

ELECTRICAL CHARACTERISTICS

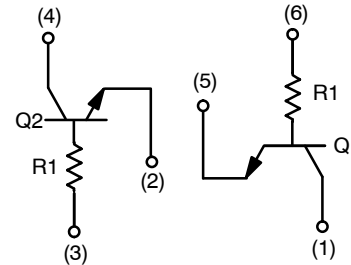
($T_A = 25^\circ\text{C}$ unless otherwise noted)

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. $\leq 2\%$.

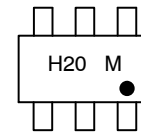


SC-74R
318AA
Style 21



SC-74

MARKING DIAGRAM

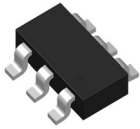


H20 = Specific Device Code
M = Date Code

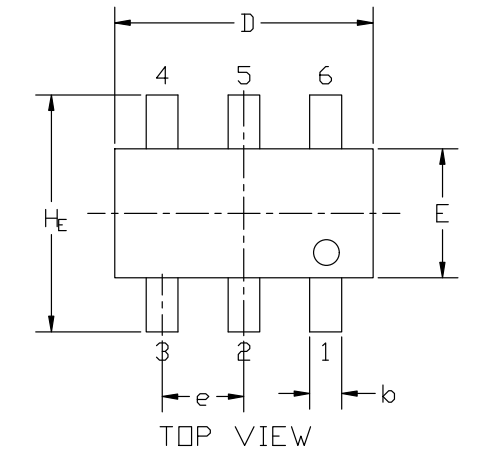
ORDERING INFORMATION

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

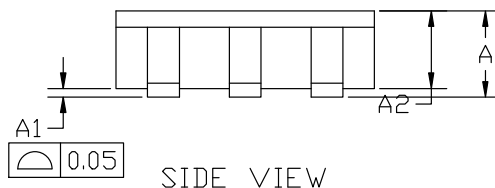
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, [BRD8011/D](#).


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

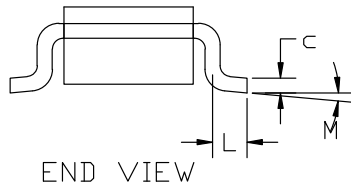
DATE 22 AUG 2023



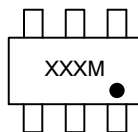
TOP VIEW



SIDE VIEW



END VIEW

GENERIC
MARKING DIAGRAM*


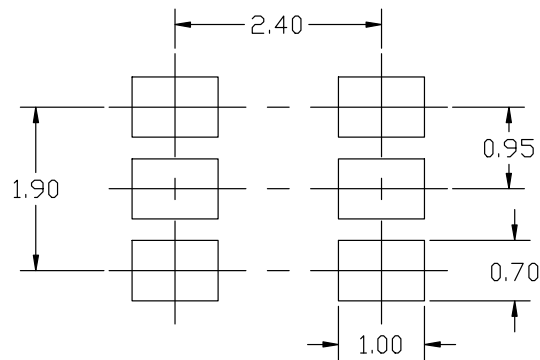
XXX = Specific Device Code
M = Date Code
▪ = Pb-Free Package

*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.

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.

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

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DESCRIPTION:	SC74-6 3.00x1.50x0.90, 0.95P	PAGE 1 OF 1

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