Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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MSD1328-RT1, MSD1328-ST1

NPN Low Voltage Output Amplifiers - Surface Mount

ON Semiconductor®

http://onsemi.com

Features

- Pb−Free Packages are Available

MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Value	Unit
Collector−Base Voltage	$V_{(BR)CBO}$	25	V
Collector−Emitter Voltage	$V_{(BR)CEO}$	20	V
Emitter−Base Voltage	$V_{(BR)EBO}$	12	V
Collector Current − Continuous	I_C	500	mA
Collector Current − Peak	$I_{C(P)}$	1000	mA

THERMAL CHARACTERISTICS

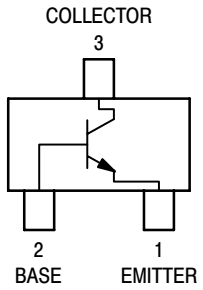
Characteristic	Symbol	Max	Unit
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	−55 ~ +150	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

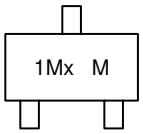
Characteristic	Symbol	Min	Max	Unit
Collector−Emitter Breakdown Voltage (I_C = 1.0 mA, I_B = 0)	$V_{(BR)CEO}$	20	−	V
Collector−Base Breakdown Voltage (I_C = 10 μA, I_E = 0)	$V_{(BR)CBO}$	25	−	V
Emitter−Base Breakdown Voltage (I_E = 10 μA, I_E = 0)	$V_{(BR)EBO}$	12	−	V
Collector−Base Cutoff Current (V_{CB} = 25 V, I_E = 0)	I_{CBO}	−	0.1	μA
DC Current Gain (Note 1) (V_{CE} = 2.0 V, I_C = 500 mA) MSD1328−RT1	h_{FE}	200	350	−
MSD1328−ST1		300	500	
Collector−Emitter Saturation Voltage (I_C = 500 mA, I_B = 20 mA)	$V_{CE(sat)}$	−	0.4	V
Base−Emitter Saturation Voltage (I_C = 500 mA, I_B = 50 mA)	$V_{BE(sat)}$	−	1.2	V

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



SC−59
CASE 318D

MARKING DIAGRAM



x = R for RT1
S for ST1
M = Date Code

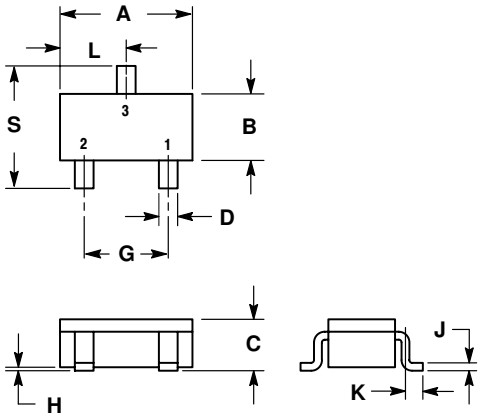
ORDERING INFORMATION

Device	Package	Shipping†
MSD1328−RT1	SC−59	3000 Tape & Reel
MSD1328−RT1G	SC−59 (Pb−Free)	3000 Tape & Reel
MSD1328−ST1	SC−59	3000 Tape & Reel
MSD1328−ST1G	SC−59 (Pb−Free)	3000 Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

PACKAGE DIMENSIONS

SC−59
CASE 318D−04
ISSUE F

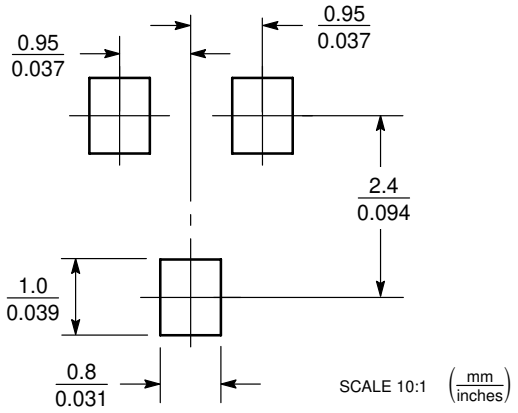


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	2.70	3.10	0.1063	0.1220
B	1.30	1.70	0.0512	0.0669
C	1.00	1.30	0.0394	0.0511
D	0.35	0.50	0.0138	0.0196
G	1.70	2.10	0.0670	0.0826
H	0.013	0.100	0.0005	0.0040
J	0.09	0.18	0.0034	0.0070
K	0.20	0.60	0.0079	0.0236
L	1.25	1.65	0.0493	0.0649
S	2.50	3.00	0.0985	0.1181

STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

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.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
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Fax: 480−829−7709 or 800−344−3867 Toll Free USA/Canada
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Japan: ON Semiconductor, Japan Customer Focus Center
2−9−1 Kamimeguro, Meguro−ku, Tokyo, Japan 153−0051
Phone: 81−3−5773−3850

ON Semiconductor Website: http://onsemi.com

Order Literature: http://www.onsemi.com/litorder

For additional information, please contact your local Sales Representative.