MSB710-RT1

Preferred Device

PNP General Purpose Amplifier Transistor Surface Mount

Features

• Pb-Free Package is Available

MAXIMUM RATINGS $(T_A = 25^{\circ}C)$

Rating	Symbol	Value	Unit
Collector-Base Voltage	V _{(BR)CBO}	-60	Vdc
Collector-Emitter Voltage	V _{(BR)CEO}	-50	Vdc
Emitter-Base Voltage	V _{(BR)EBO}	-7.0	Vdc
Collector Current – Continuous	Ic	-500	mAdc
Collector Current – Peak	I _{C(P)}	-1.0	Adc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Power Dissipation	P _D	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to +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)

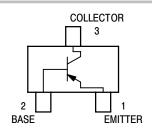
Characteristic	Symbol	Min	Max	Unit
Collector–Emitter Breakdown Voltage (I _C = -10 mAdc, I _B = 0)	V _{(BR)CEO}	-50	ı	Vdc
Collector–Base Breakdown Voltage ($I_C = -10 \mu Adc, I_E = 0$)	V _{(BR)CBO}	-60	ı	Vdc
Emitter–Base Breakdown Voltage ($I_E = -10 \mu Adc, I_C = 0$)	V _{(BR)EBO}	-7.0	ı	Vdc
Collector–Base Cutoff Current $(V_{CB} = -20 \text{ Vdc}, I_E = 0)$	I _{CBO}	1	-0.1	μAdc
DC Current Gain (Note 1) ($V_{CE} = -10 \text{ Vdc}$, $I_{C} = -150 \text{ mAdc}$) ($V_{CE} = -10 \text{ Vdc}$, $I_{C} = 500 \text{ mAdc}$)	h _{FE1} h _{FE2}	120 40	240 –	-
Collector–Emitter Saturation Voltage ($I_C = -300 \text{ mAdc}$, $I_B = -30 \text{ mAdc}$)	V _{CE(sat)}	ı	-0.6	Vdc
Collector–Base Saturation Voltage (I _C = -300 mAdc, I _B = -30 mAdc)	V _{BE(sat)}	ı	-1.5	Vdc
Output Capacitance (V _{CB} = -10 Vdc, I _E = 0, f = 1.0 MHz)	C _{ob}	_	15	pF

^{1.} Pulse Test: Pulse Width \leq 300 μ s, D.C. \leq 2%.



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SC-59 **CASE 318D**

MARKING DIAGRAM



CR = Device Code = Date Code* = Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping [†]
MSB710-RT1	SC-59	3000 / Tape & Reel
MSB710-RT1G	SC-59 (Pb-Free)	3000 / Tape & Reel

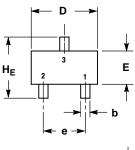
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

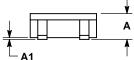
Preferred devices are recommended choices for future use and best overall value

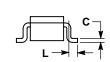
MSB710-RT1

PACKAGE DIMENSIONS

SC-59 CASE 318D-04 ISSUE G





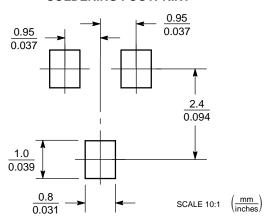


NOTES:

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

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
Α	1.00	1.15	1.30	0.039	0.045	0.051
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.35	0.43	0.50	0.014	0.017	0.020
С	0.09	0.14	0.18	0.003	0.005	0.007
D	2.70	2.90	3.10	0.106	0.114	0.122
E	1.30	1.50	1.70	0.051	0.059	0.067
е	1.70	1.90	2.10	0.067	0.075	0.083
L	0.20	0.40	0.60	0.008	0.016	0.024
HE	2.50	2.80	3.00	0.099	0.110	0.118

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.

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