2SC1214

Silicon NPN Epitaxial

RENESAS

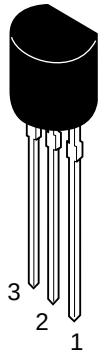
ADE-208-1050 (Z)
1st. Edition
Mar. 2001

Application

Low frequency amplifier

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	50	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	4	V
Collector current	I_C	500	mA
Collector power dissipation	P_C	600	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

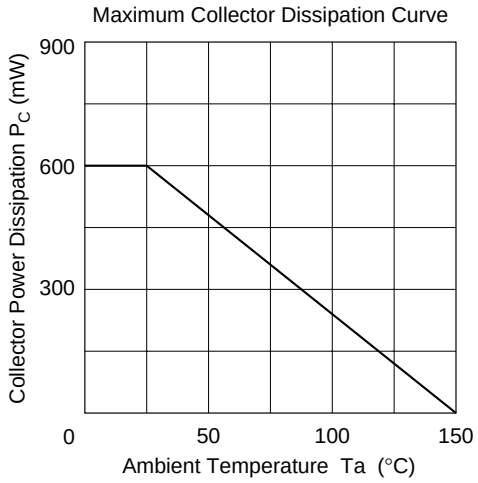
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	50	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	V	I_C = 1 mA, R_{BE} =
Emitter to base breakdown voltage	$V_{(BR)EBO}$	4	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	0.5	µA	V_{CB} = 20 V, I_E = 0
DC current transfer ratio	h_{FE}*	60	—	320		V_{CE} = 3 V, I_C = 10 mA
	h_{FE}	10	—	—		V_{CE} = 3 V, I_C = 500 mA (pulse test)
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.2	0.6	V	I_C = 150 mA, I_B = 15 mA (Pulse test)
Base to emitter voltage	V_{BE}	—	0.64	—	V	V_{CE} = 3 V, I_C = 10 mA

Note: 1. The 2SC1214 is grouped by h_{FE} as follows.

B	C	D
60 to 120	100 to 200	160 to 320

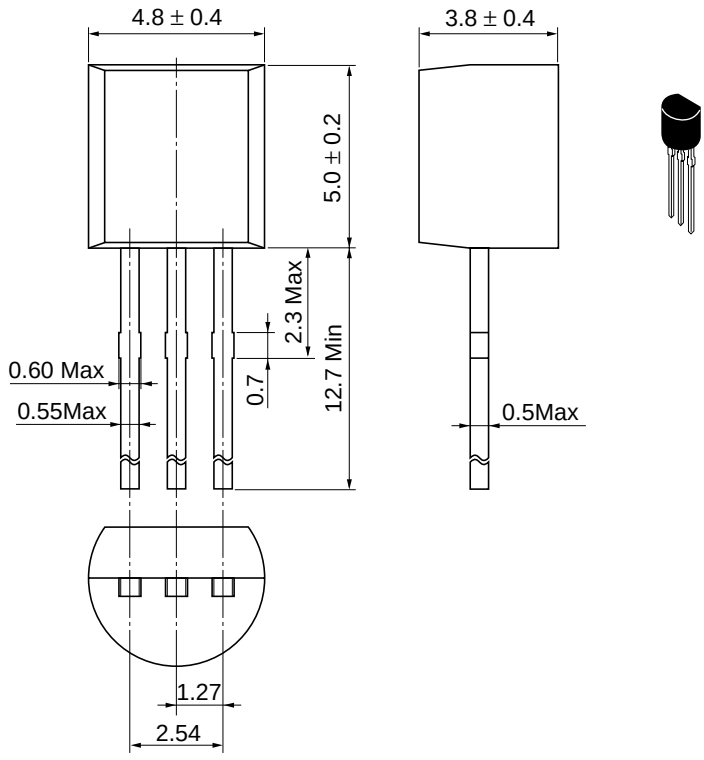
See characteristic curves of 2SC1213.


Maximum Collector Dissipation Curve
Collector Power Dissipation P_C (mW)
900
600
300
0
50
100
150
Ambient Temperature Ta (°C)

Package Dimensions

As of January, 2001

Unit: mm



Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	0.25 g