

2SD2655

Silicon NPN Epitaxial Planer Low Frequency Power Amplifier

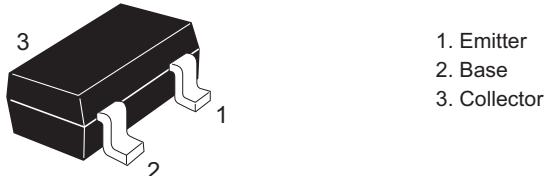
REJ03G0810-0200
(Previous ADE-208-1388A)
Rev.2.00
Aug.10.2005

Features

- Small size package: MPAK (SC-59A)
- Large Maximum current: $I_C = 1 \text{ A}$
- Low collector to emitter saturation voltage: $V_{CE(sat)} = 0.3 \text{ V}$ max.(at $I_C/I_B = 0.5 \text{ A}/0.05 \text{ A}$)
- High power dissipation: $P_C = 800 \text{ mW}$ (when using alumina ceramic board (25 x 60 x 0.7 mm))
- Complementary pair with 2SB1691

Outline

RENESAS Package code: PLSP0003ZB-A
(Package name: MPAK)



Note: Marking is "WM-".

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	1	A
Collector peak current	$i_C(\text{peak})$	2	A
Collector power dissipation	P_C	800*	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

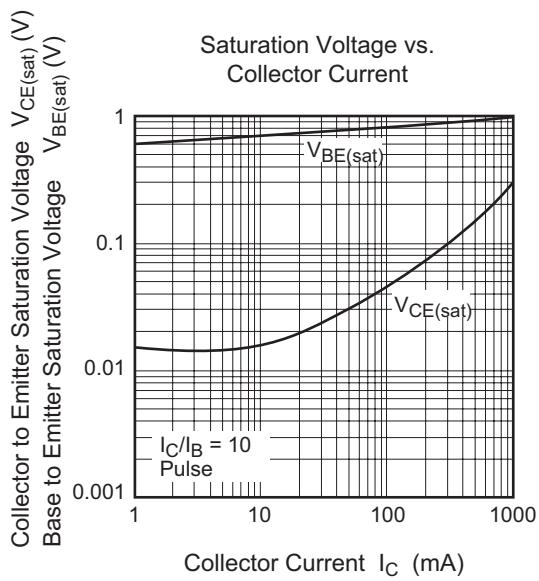
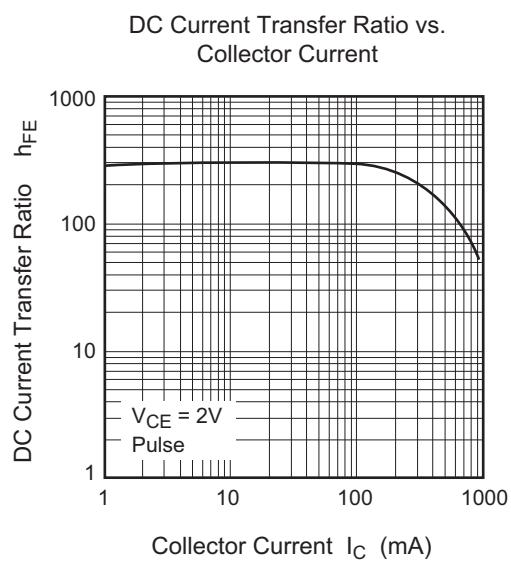
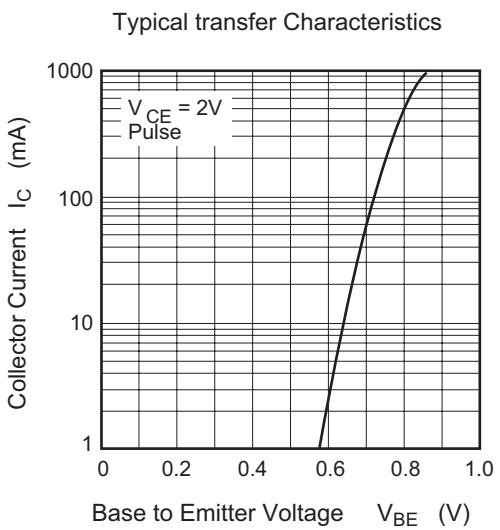
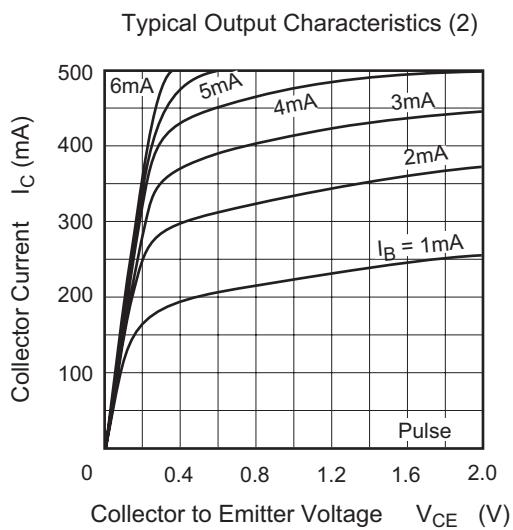
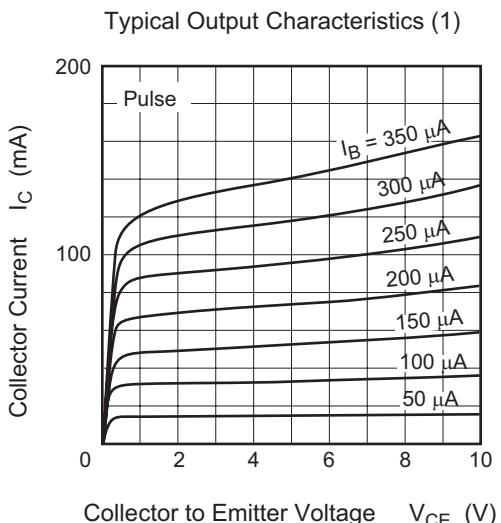
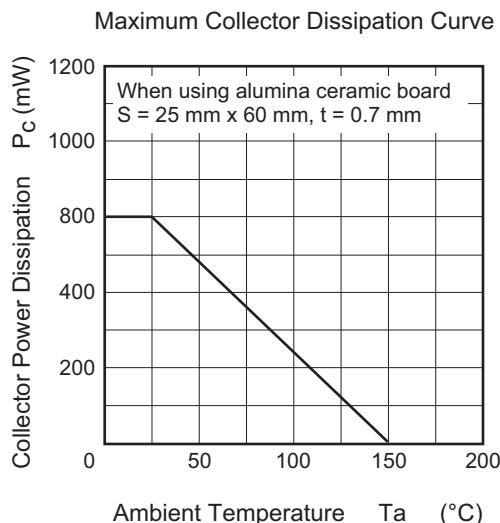
Note: *When using alumina ceramic board (25 x 60 x 0.7 mm)

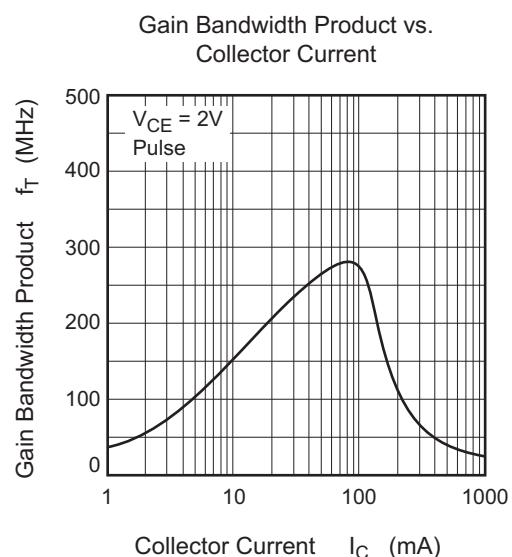
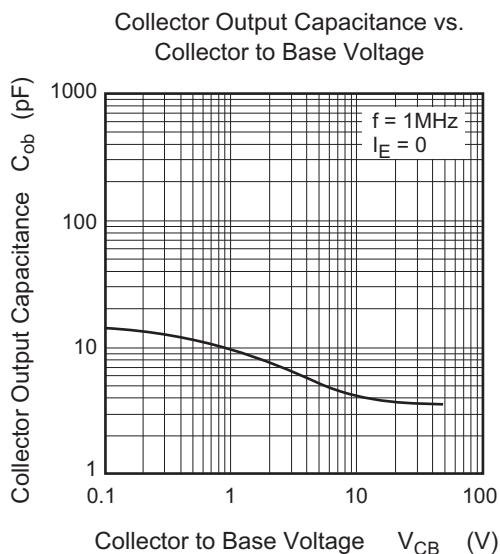
Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Collector to base breakdown voltage	$V_{(BR)CBO}$	60	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	V	$I_C = 1 mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	100	nA	$V_{CB} = 50 V, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	100	nA	$V_{EB} = 5 V, I_C = 0$
DC current transfer ratio	h_{FE}	200	—	500	—	$V_{CE} = 2 V, I_C = 0.1 A$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.16	0.3	V	$I_C = 0.5 A, I_B = 0.05 A,$ Pulse test
Base to emitter saturation voltage	$V_{BE(sat)}$	—	0.91	1.2	V	$I_C = 0.5 A, I_B = 0.05 A,$ Pulse test
Gain bandwidth product	f_T	—	280	—	MHz	$V_{CE} = 2 V, I_C = 0.1 A$
Collector output capacitance	Cob	—	4.2	—	pF	$V_{CB} = 10 V, I_E = 0,$ $f = 1 \text{ MHz}$

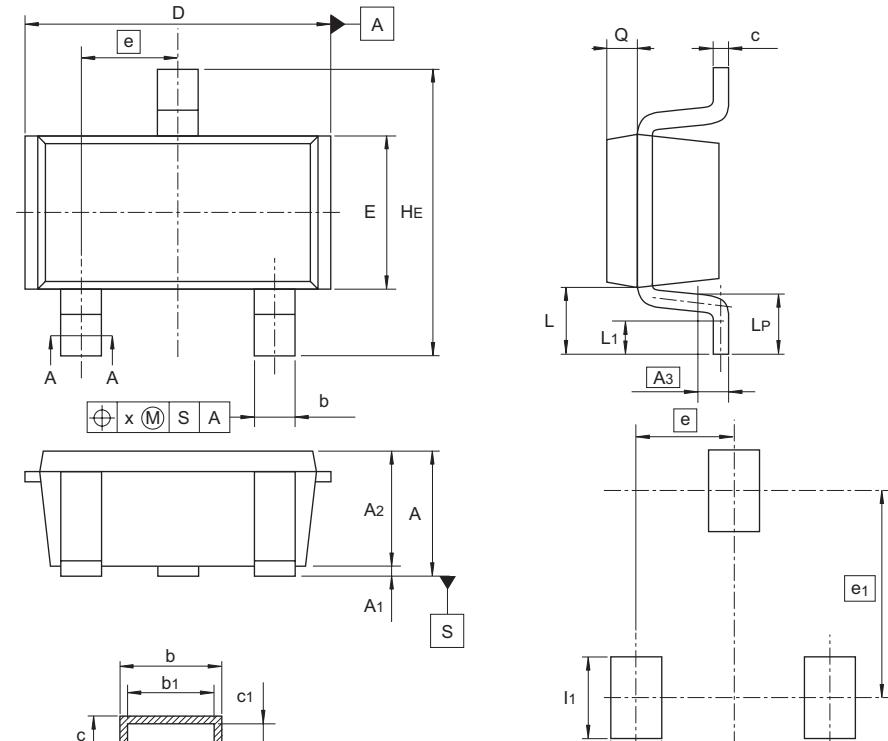
Main Characteristics





Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]
SC-59A	PLSP0003ZB-A	MPAK(T) / MPAK(T)V, MPAK / MPAKV	0.011g



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	1.0	—	1.3
A ₁	0	—	0.1
A ₂	1.0	1.1	1.2
[A ₃]	—	0.25	—
b	0.35	0.42	0.5
b ₁	—	0.4	—
c	0.1	0.13	0.15
c ₁	—	0.11	—
D	2.7	—	3.1
E	1.35	1.5	1.65
[e]	—	0.95	—
HE	2.2	2.8	3.0
L	0.35	—	0.75
L ₁	0.15	—	0.55
L _P	0.25	—	0.65
x	—	—	0.05
b ₂	—	—	0.55
[e ₁]	—	1.95	—
l ₁	—	—	1.05
Q	—	0.3	—

Ordering Information

Part Name	Quantity	Shipping Container
2SD2655WM-TL-E	3000	Ø 178 mm Reel, 8 mm Emboss Taping

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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