

# 2SD2655

Silicon NPN Epitaxial Planer  
Low Frequency Power Amplifier

## HITACHI

ADE-208-1388A (Z)

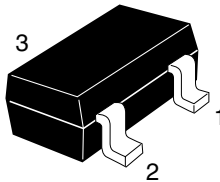
Rev.1  
Jun. 2001

### 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

MPAK



1. Emitter
2. Base
3. Collector

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

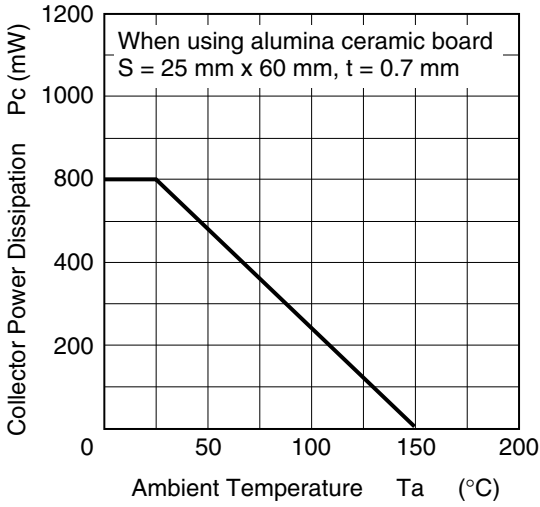
Note: \*When using alumina ceramic board (25 x 60 x 0.7 mm)

**Electrical Characteristics**

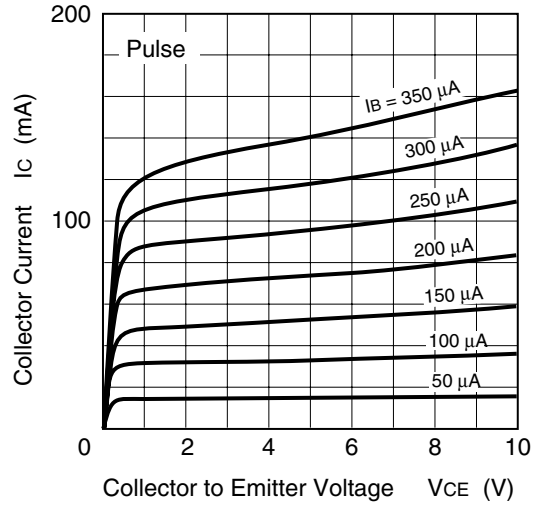
(Ta = 25 °C)

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

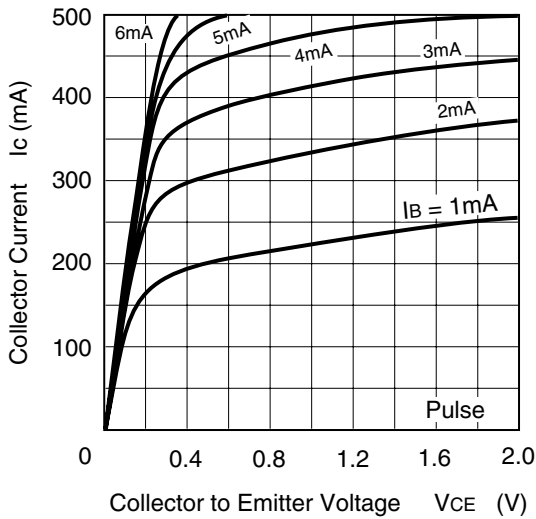
Maximum Collector Dissipation Curve



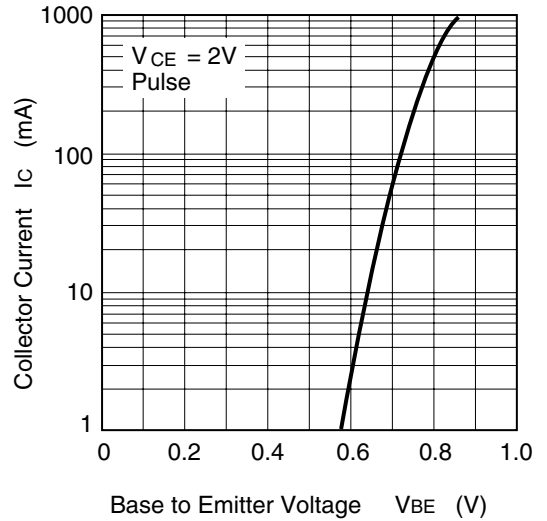
Typical Output Characteristics (1)

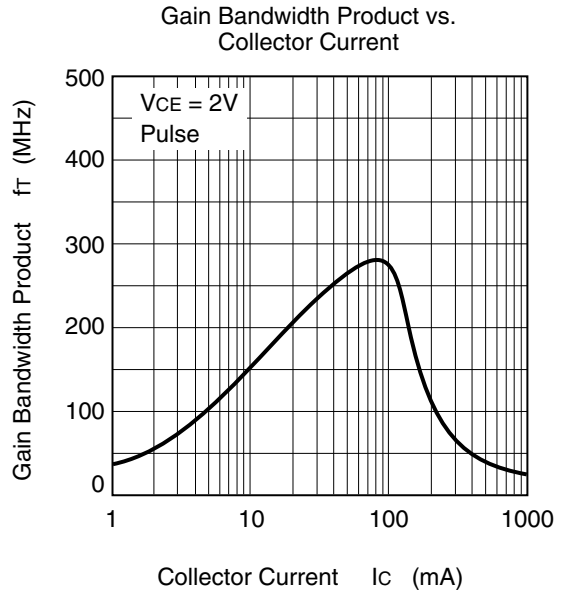
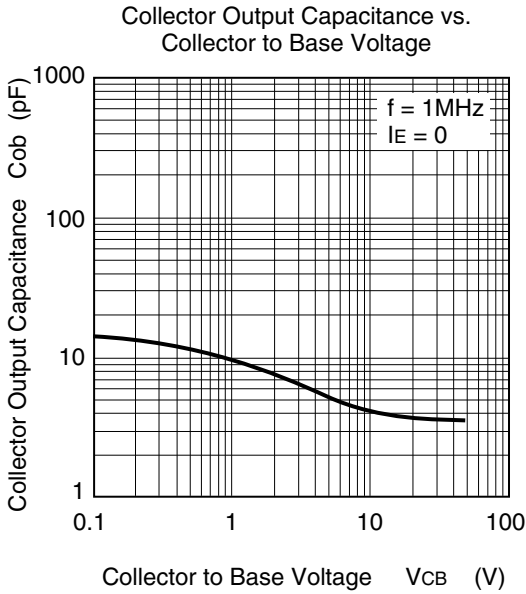
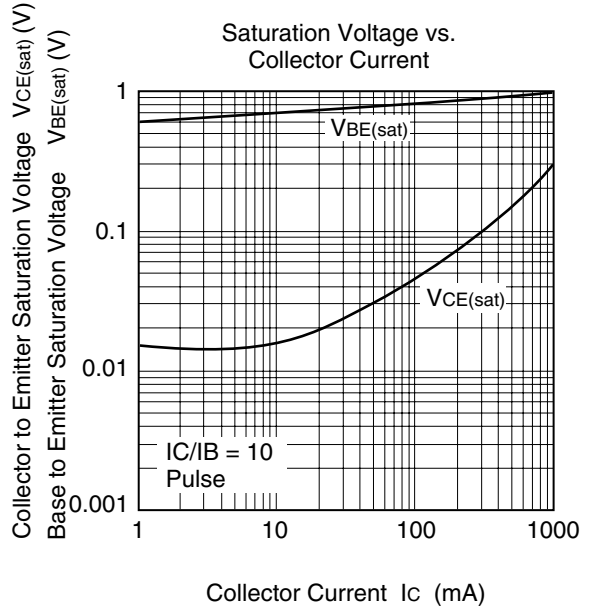
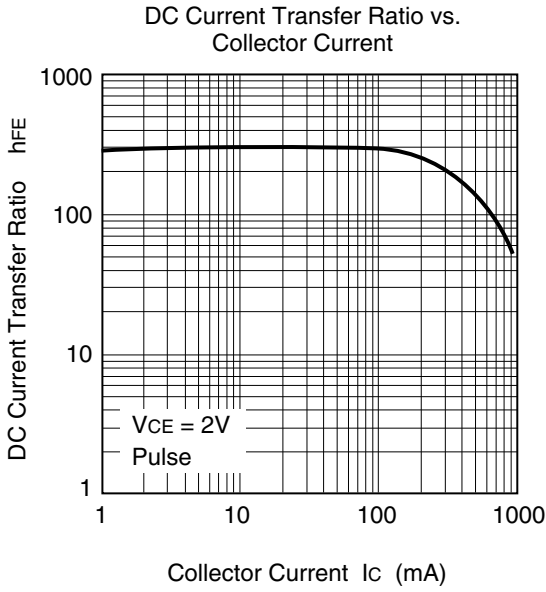


Typical Output Characteristics (2)



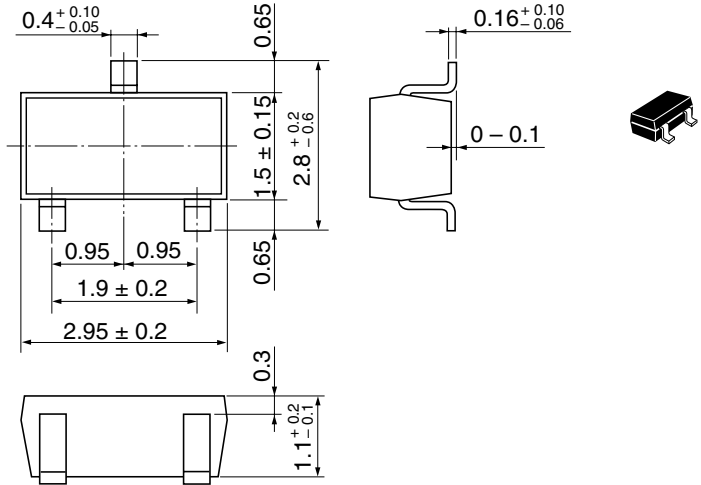
Typical transfer Characteristics





Package Dimensions

As of January, 2001  
Unit: mm



Hitachi Code	MPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.011 g

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