2SB1028

Silicon PNP Epitaxial

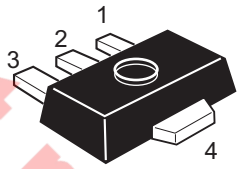
REJ03G0663-0200
(Previous ADE-208-1039)
Rev.2.00
Aug.10.2005

Application

Low frequency power amplifier

Outline

RENESAS Package code: PLZZ0004CA-A
(Package name: UPAK®)



1. Base
2. Collector
3. Emitter
4. Collector (Flange)

*UPAK is a trademark of Renesas Technology Corp.

Not recommend for new design

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–180	V
Collector to emitter voltage	V_{CEO}	–160	V
Emitter to base voltage	V_{EBO}	–5	V
Collector current	I_C	–1.5	A
Collector peak current	$i_{C(peak)}$*[1]	–3	A
Collector power dissipation	P_C*[2]	1	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Notes: 1. PW ≤ 10 ms, Duty cycle ≤ 20%
2. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

Electrical Characteristics

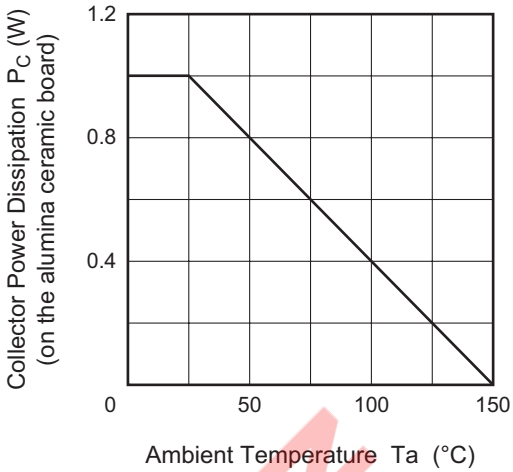
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	–180	—	—	V	I_C = –1 mA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–160	—	—	V	I_C = –10 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	–5	—	—	V	I_E = –1 mA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	–10	µA	V_{CB} = –160 V, I_E = 0
DC current transfer ratio	h_{FE1}	100	—	200		V_{CE} = –5 V, I_C = –0.15 A, pulse
	h_{FE2}	30	—	—		V_{CE} = –5 V, I_C = –0.5 A, pulse
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–1.0	V	I_C = –0.5 A, I_B = –50 mA, Pulse
Base to emitter voltage	V_{BE}	—	—	–0.9	V	V_{CE} = –5 V, I_C = –0.15 A, pulse

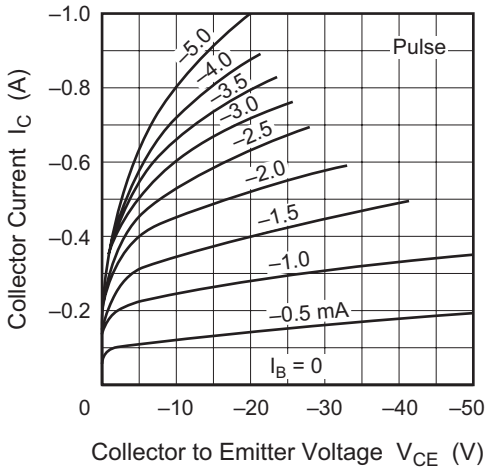
Not recommend for new design

Main Characteristics

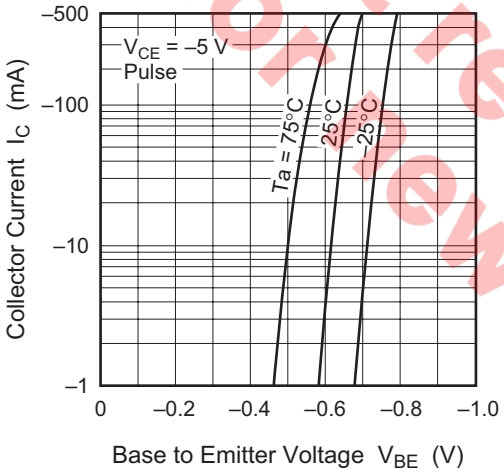
Maximum Collector Dissipation Curve



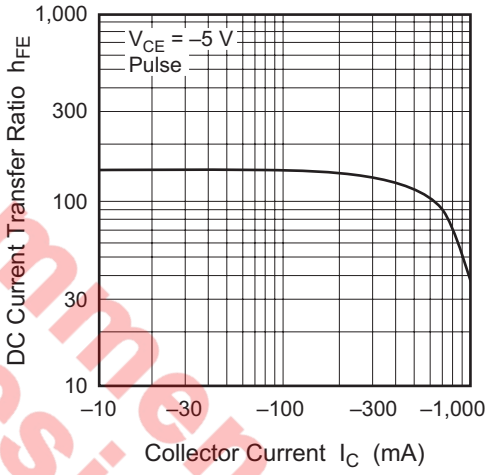
Typical Output Characteristics



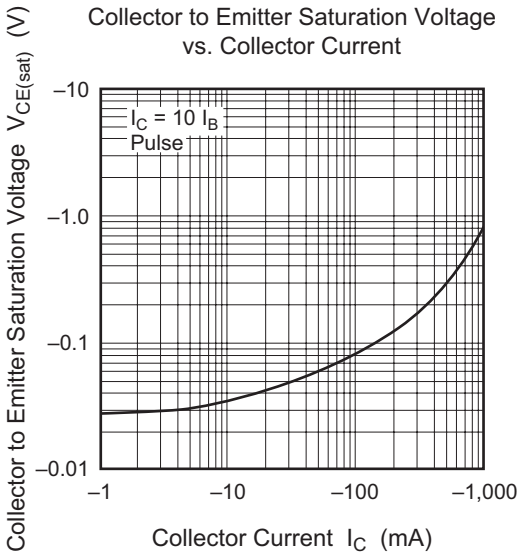
Typical Transfer Characteristics



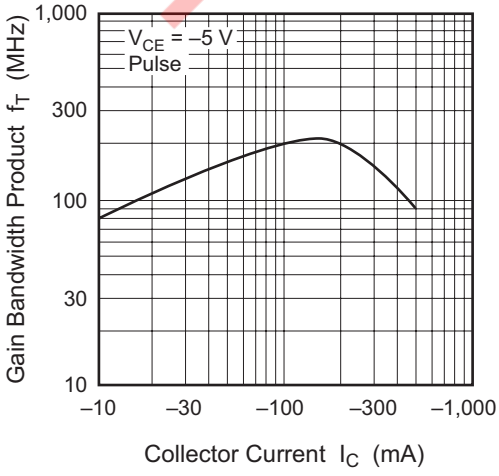
DC Current Transfer Ratio vs. Collector Current



Collector to Emitter Saturation Voltage vs. Collector Current

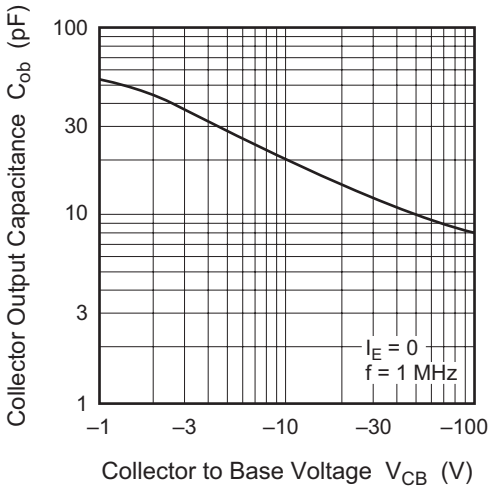


Gain Bandwidth Product vs. Collector Current



Not recommend for new design

Collector Output Capacitance
vs. Collector to Base Voltage

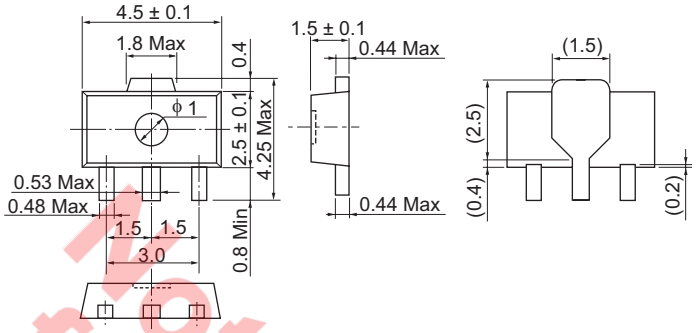


Not recommend for new design

Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]
SC-62	PLZZ0004CA-A	UPAK / UPAKV	0.050g

Unit: mm



Not recommend for new design

Ordering Information

Part Name	Quantity	Shipping Container
2SB1028EMTR-E	1000	φ 178 mm Reel, 12 mm Emboss Taping

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