

2SD1421

Silicon NPN Epitaxial

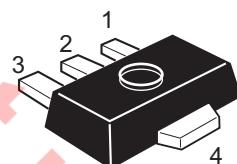
REJ03G0789-0200
 (Previous ADE-208-1152)
 Rev.2.00
 Aug.10.2005

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.

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	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

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

Electrical Characteristics

(Ta = 25°C)

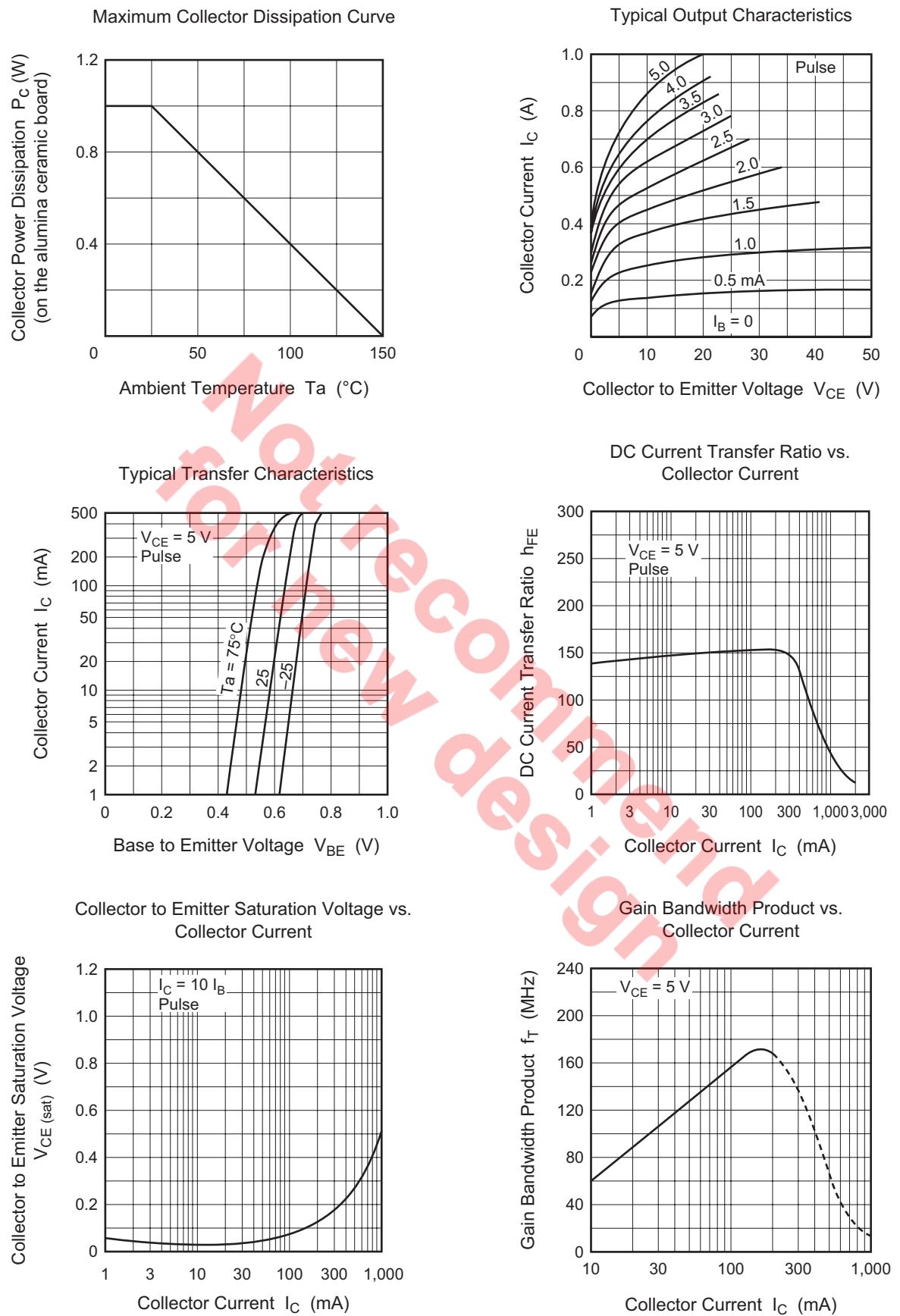
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	V _{(BR)CBO}	180	—	—	V	I _C = 1 mA, I _E = 0
Collector to emitter breakdown voltage	V _{(BR)CEO}	160	—	—	V	I _C = 10 mA, R _{BE} = ∞
Emitter to base breakdown voltage	V _{(BR)EBO}	5	—	—	V	I _E = 1 mA, I _C = 0
Collector cutoff current	I _{CBO}	—	—	10	μ A	V _{CB} = 160 V, I _E = 0
DC current transfer ratio	h _{FE1} ^{*1}	60	—	200		V _{CE} = 5 V, I _C = 0.15 A
	h _{FE2}	30	—	—		V _{CE} = 5 V, I _C = 0.5 A
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

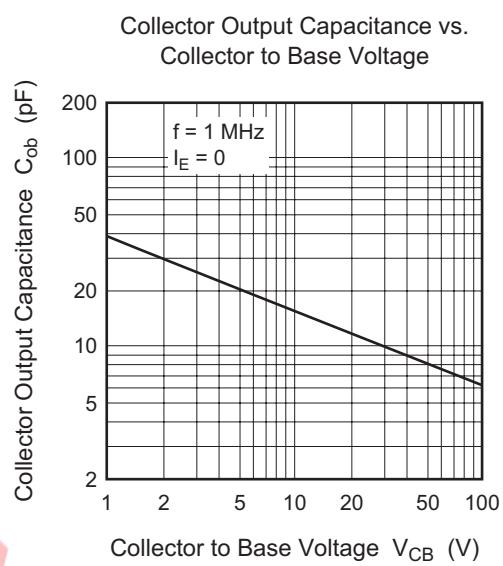
Note: 1. The 2SD1421 is grouped by h_{FE1} as follows.

Mark	ED	EE
h _{FE1}	60 to 120	100 to 200

Not recommended
for new design

Main Characteristics

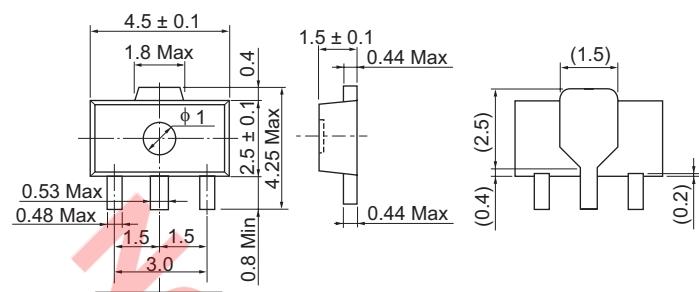




Not recommended
for new design

Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS(Typ.)	Unit: mm
SC-62	PLZZ0004CA-A	UPAK / UPAKV	0.050g	



Ordering Information

Part Name	Quantity	Shipping Container
2SD1421EDTR-E	1000	φ 178 mm Reel, 12 mm Emboss Taping
2SD1421EETR-E		

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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Renesas Technology America, Inc.
450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd.
7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.
10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.
Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.
1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

Renesas Technology Korea Co., Ltd.
Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea
Tel: <82> 2-796-3115, Fax: <82> 2-796-2145

Renesas Technology Malaysia Sdn. Bhd.
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jalan Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: <603> 7955-9390, Fax: <603> 7955-9510