HIT1577

Silicon PNP Epitaxial

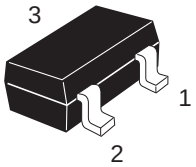
R07DS0485EJ0100
Rev.1.00
Jun 22, 2011

Features

- Low frequency power amplifier

Outline

RENESAS Package code: PTSP0003ZA-A
(Package name: CMPAK)



1. Emitter
2. Base
3. Collector

Note: Marking is “TQ–”.

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}	–5	V
Collector current	I_C	–0.5	A
Collector power dissipation	P_C	0.1	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

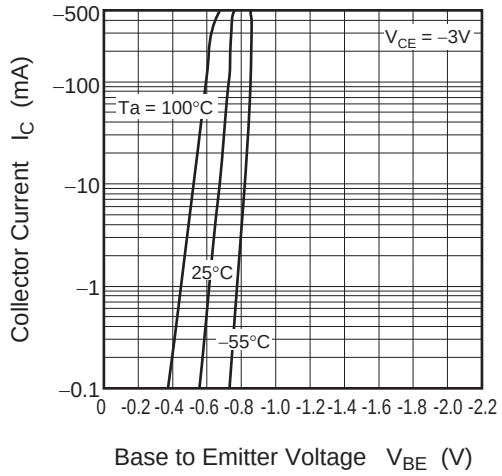
Electrical Characteristics

(Ta = 25°C)

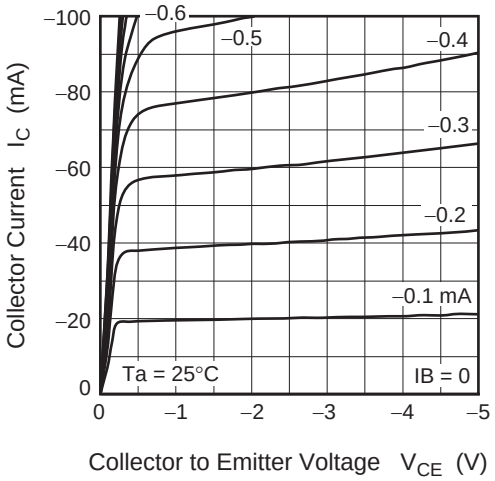
Item	Symbol	Min.	Typ	Max.	Unit	Test Conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	–50	—	—	V	I_C = –10 μA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–50	—	—	V	I_C = –1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	–5	—	—	V	I_E = –10 μA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	–500	nA	V_{CB} = –20 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	–500	nA	V_{EB} = –4 V, I_C = 0
DC current transfer ratio	h_{FE1}	120	—	270	—	V_{CE} = –3 V, I_C = -10 mA
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–0.6	V	I_C = –150 mA, I_B = –15 mA
Transition frequency	f_T	—	180	—	MHz	V_{CE} = –5V, I_C = –20 mA, f = 100 MHz
Output capacitance	Cob	—	4.55	—	pF	V_{CB} = –10V, I_E = 0 A, f = 1 MHz

Main Characteristics

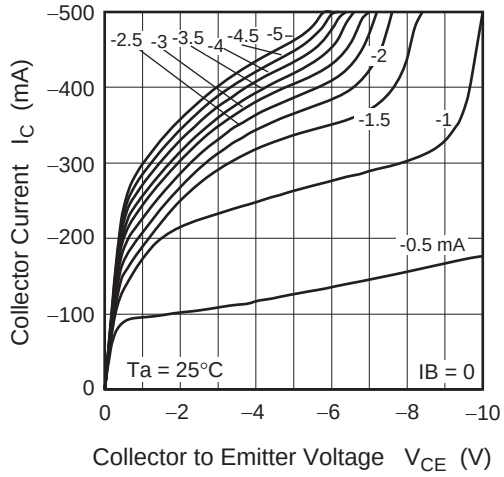
Typical Transfer Characteristic



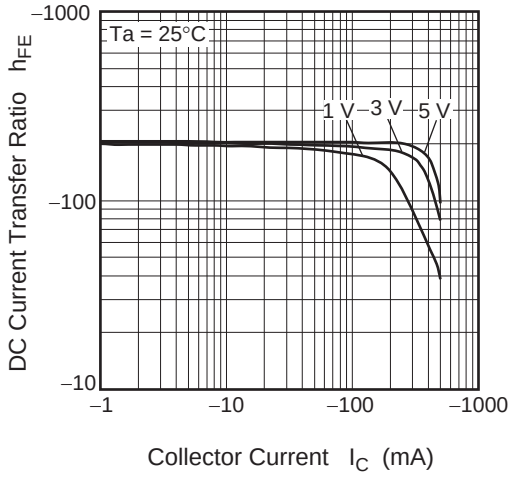
Typical Output Characteristics (1)



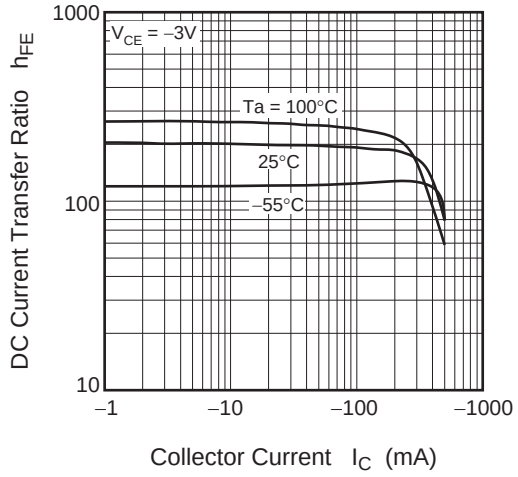
Typical Output Characteristics (2)



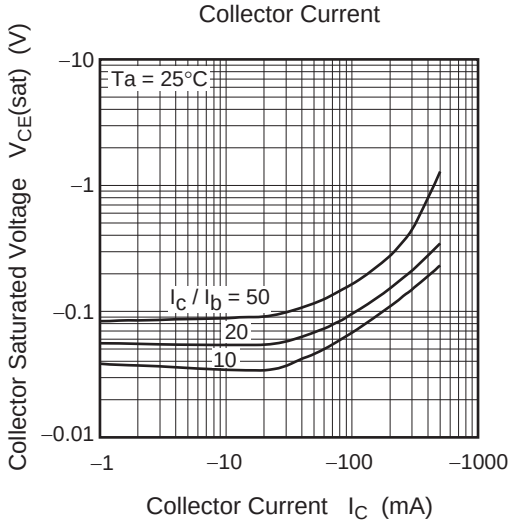
DC Current Transfer Ratio vs. Collector Current



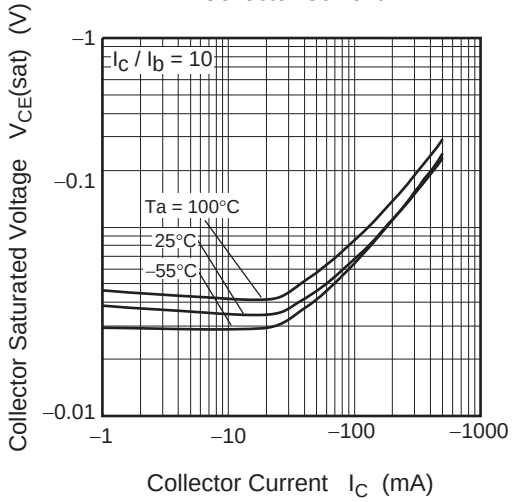
DC Current Transfer Ratio vs. Collector Current



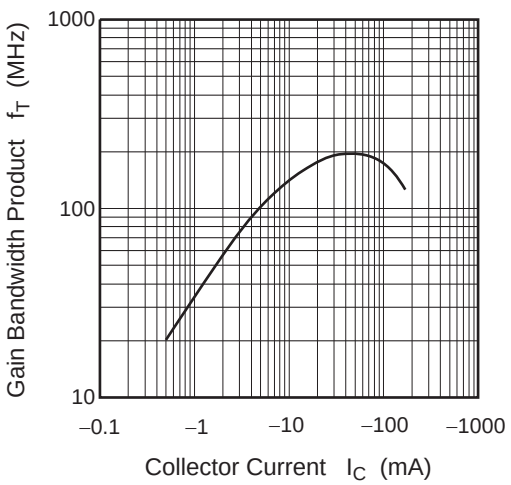
Collector Saturated Voltage vs. Collector Current



Collector Saturated Voltage vs. Collector Current

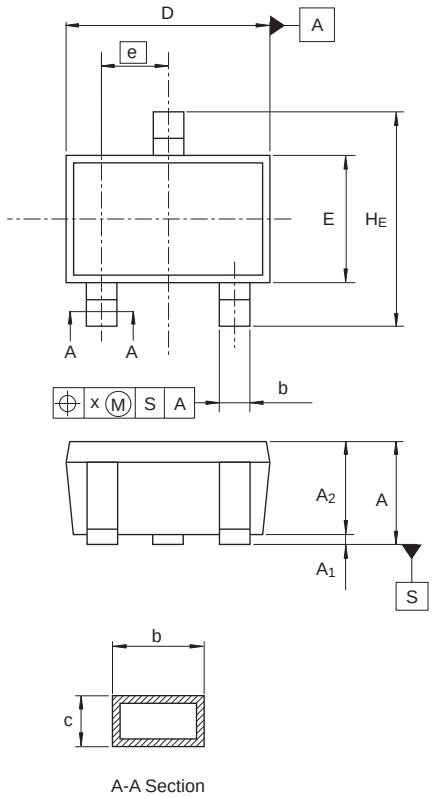


Gain Bandwidth Product vs. Collector Current

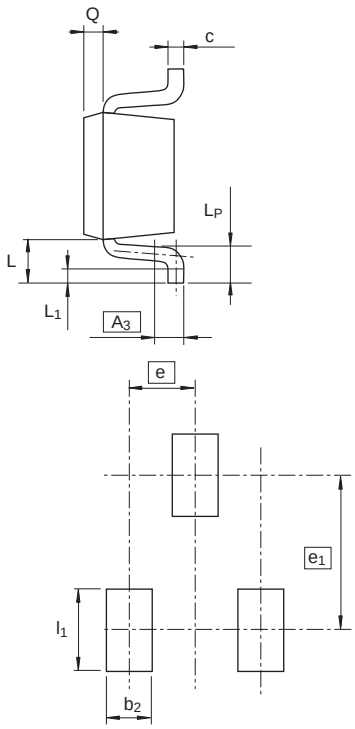


Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
CMPAK	SC-70	PTSP0003ZA-A	CMPAK / CMPAKV	0.006g



A-A Section



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.8	–	1.1
A_1	0	–	0.1
A_2	0.8	0.9	1.0
A_3	–	0.25	–
b	0.25	0.3	0.4
c	0.1	0.16	0.26
D	1.8	2.0	2.2
E	1.15	1.25	1.35
e	–	0.65	–
H_E	1.8	2.1	2.4
L	0.3	–	0.7
L_1	0.1	–	0.5
L_P	0.2	–	0.6
x	–	–	0.05
b_2	–	–	0.45
e_1	–	1.5	–
l_1	–	–	0.9
Q	–	0.2	–

Ordering Information

Orderable Part Number	Quantity	Shipping Container
HIT1577TQ-TR-HQ	3000 pcs.	ϕ178 mm Reel, 8 mm Emboss Taping

Note: This product is designed for consumer use and not for automotive or industrial use.

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