

2SB647, 2SB647A

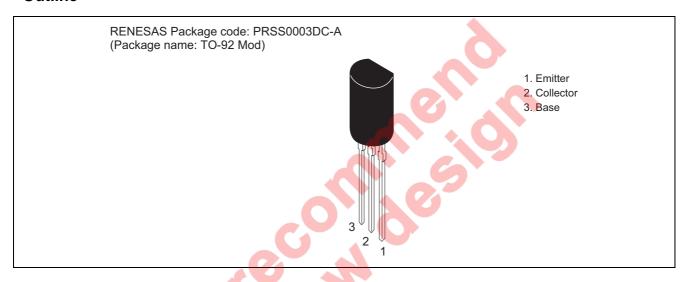
Silicon PNP Epitaxial

REJ03G0648-0200 (Previous ADE-208-1025) Rev.2.00 Aug.10.2005

Application

- Low frequency power amplifier
- Complementary pair with 2SD667/A

Outline



Absolute Maximum Ratings

 $(Ta = 25^{\circ}C)$

Item	Symbol	2SB647	2SB647A	Unit
Collector to base voltage	V_{CBO}	-120	-120	V
Collector to emitter voltage	V _{CEO}	-80	-100	V
Emitter to base voltage	V _{EBO}	- 5	- 5	V
Collector current	Ic	-1	-1	Α
Collector peak current	i _{C(peak)}	-2	-2	Α
Collector power dissipation	Pc	0.9	0.9	W
Junction temperature	Tj	150	150	°C
Storage temperature	Tstg	-55 to +150	-55 to +150	°C

Electrical Characteristics

 $(Ta = 25^{\circ}C)$

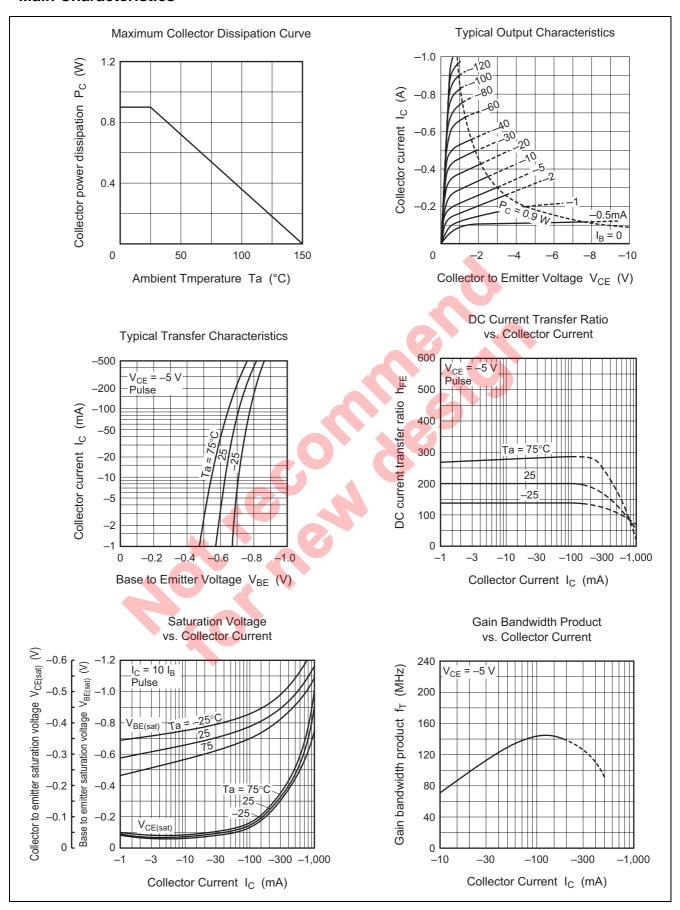
			2SB647		:	2SB647 <i>A</i>	4		
Item	Symbol	Min	Тур	Max	Min	Тур	Max	Unit	Test conditions
Collector to base breakdown voltage	V _{(BR)CBO}	-120	ı	ı	-120	_	ı	٧	$I_C = -10 \ \mu A, \ I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-80	l	I	-100		l	>	$I_C = -1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	- 5	l	l	- 5		l	>	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	I _{CBO}			-10	_	_	-10	μΑ	$V_{CB} = -100 \text{ V}, I_E = 0$
DC current transfer ratio	h _{FE1} *1	60	ı	320	60	_	200		$V_{CE} = -5 \text{ V},$ $I_C = -150 \text{ mA*}^2$
	h _{FE2}	30	1	1	30	_	-		$V_{CE} = -5 \text{ V},$ $I_C = -500 \text{ mA*}^2$
Collector to emitter saturation voltage	V _{CE(sat)}	l	l	-1			7	>	$I_C = -500 \text{ mA},$ $I_B = -50 \text{ mA}^{*2}$
Base to emitter voltage	V_{BE}	1	1	-1.5	_		-1.5	V	$V_{CE} = -5 \text{ V},$ $I_C = -150 \text{ mA}^{*2}$
Gain bandwidth product	f⊤		140		_	140	_	MHz	$V_{CE} = -5 \text{ V},$ $I_{C} = -150 \text{ mA}$
Collector output capacitance	Cob		20		7	20	X ^o	pF	$V_{CB} = -10 \text{ V}, I_{E} = 0$ f = 1 MHz

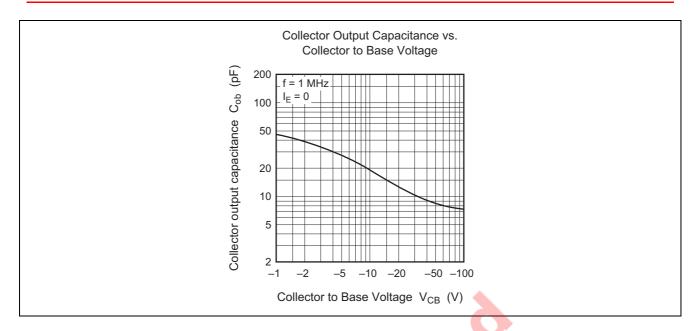
Notes: 1. The 2SB647 and 2SB647A are grouped by h_{FE1} as follows.

2. Pulse test

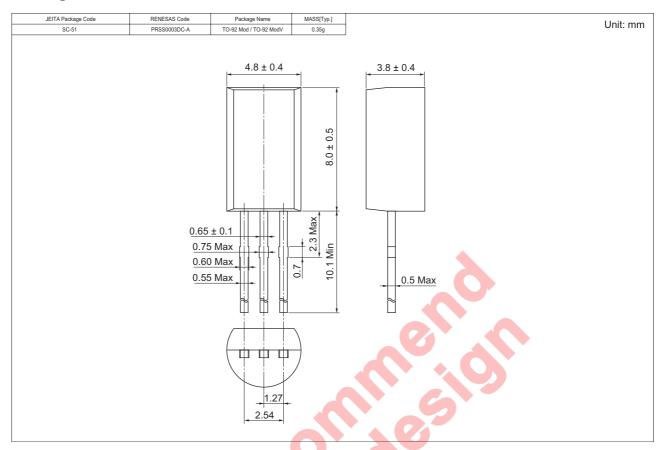
	В	С	D
2SB647	_	100 to 200	160 to 320
2SB647A	60 to 120	100 to 200	

Main Characteristics





Package Dimensions



Ordering Information

Part Name	Quan	tity	Shipping Container	
2SB647CTZ-E	2500	F	Hold Box, Radial Taping	
2SB647DTZ-E				
2SB647ABTZ-E				
2SB647ACTZ-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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