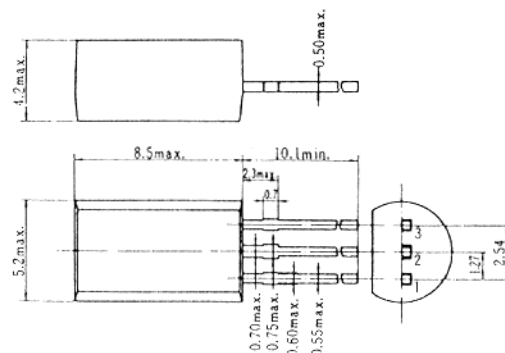


2SB647, 2SB647A

SILICON PNP EPITAXIAL

LOW FREQUENCY POWER AMPLIFIER

Complementary pair with 2SD667/A



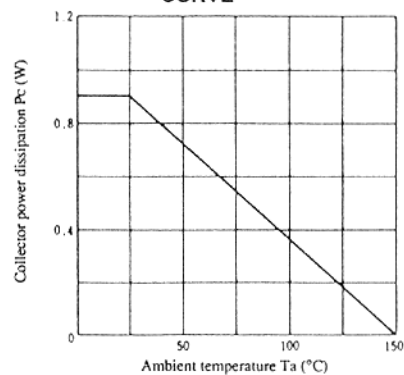
(JEDEC TO-92 MOD.)

1. Emitter
 2. Collector
 3. Base
- (Dimensions in mm)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB647	2SB647A	Unit
Collector to base voltage	V _{CB0}	-120	-120	V
Collector to emitter voltage	V _{CEO}	-80	-100	V
Emitter to base voltage	V _{EBO}	-5	-5	V
Collector current	I _C	-1	-1	A
Collector peak current	i _{C(peak)}	-2	-2	A
Collector power dissipation	P _C	0.9	0.9	W
Junction temperature	T _j	150	150	°C
Storage temperature	T _{stg}	-55 to +150	-55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	2SB647			2SB647A			Unit
			min.	typ.	max.	min.	typ.	max.	
Collector to base breakdown voltage	V _{(BR)CBO}	I _C = -10μA, I _E = 0	-120	—	—	-120	—	—	V
Collector to emitter breakdown voltage	V _{(BR)CEO}	I _C = -1mA, R _{BE} = ∞	-80	—	—	-100	—	—	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E = -10μA, I _C = 0	-5	—	—	-5	—	—	V
Collector cutoff current	I _{CBO}	V _{CB} = -100V, I _E = 0	—	—	-10	—	—	-10	μA
DC current transfer ratio	h _{FE1}	V _{CE} = -5V, I _C = -150mA	60	—	320	60	—	200	
	h _{FE2}	V _{CE} = -5V, I _C = -500mA**	30	—	—	30	—	—	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = -500mA, I _B = -50mA	—	—	-1	—	—	-1	V
Base to emitter voltage	V _{BE}	V _{CE} = -5V, I _C = -150mA	—	—	-1.5	—	—	-1.5	V
Gain bandwidth product	f _T	V _{CE} = -5V, I _C = -150mA	—	140	—	—	140	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = -10V, I _E = 0, f = 1MHz	—	20	—	—	20	—	pF

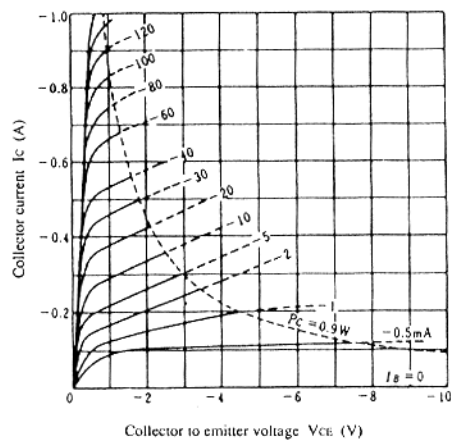
* The 2SB647 and 2SB647A are grouped by h_{FE1} as follows.

** Pulse Test

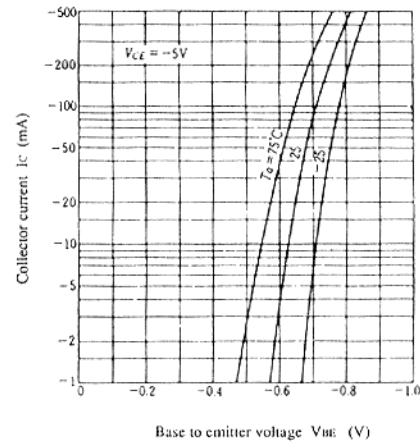
	B	C	D
2SB647	60 to 120	100 to 200	160 to 320
2SB647A	60 to 120	100 to 200	—

2SB647, 2SB647A

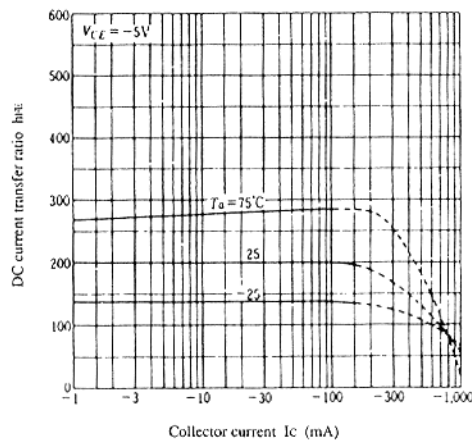
TYPICAL OUTPUT CHARACTERISTICS



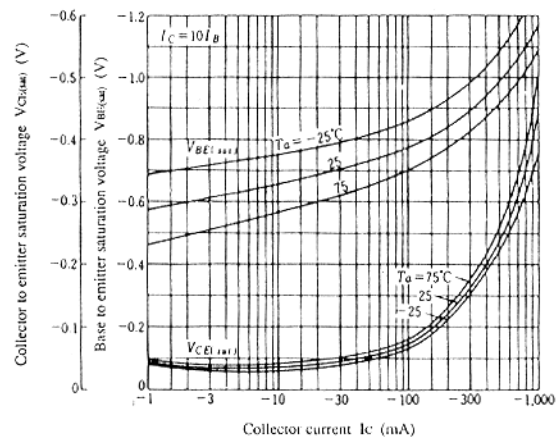
TYPICAL TRANSFER CHARACTERISTICS



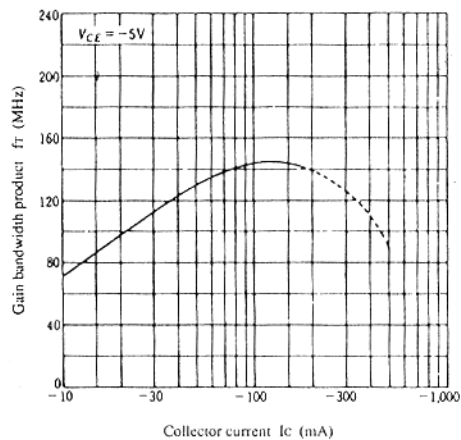
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE

