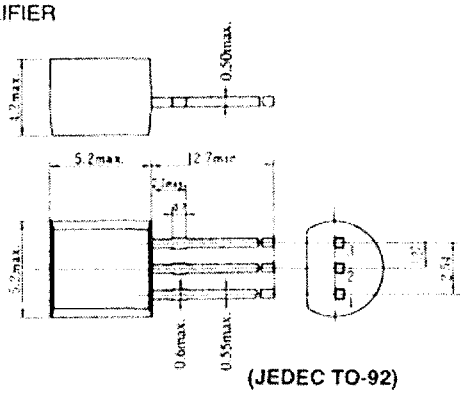
HITACHI

2SB637 (K)

SILICON PNP EPITAXIAL

LOW FREQUENCY AMPLIFIER



(JEDEC TO-92)

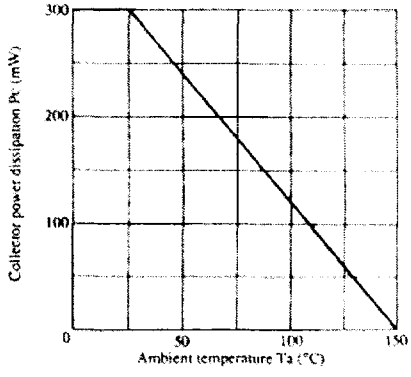
1. Emitter
2. Collector
3. Base

(Dimensions in mm)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB637 (K)	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	−100	mA
Emitter current	I_E	100	mA
Collector power dissipation	P_C	300	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = −10μA, I_E = 0	−50	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = −1mA, R_{BE} = ∞	−50	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	I_E = −10μA, I_C = 0	−5	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = −18A, I_E = 0	—	—	−100	nA
DC current transfer ratio	h_{FE}*	V_{CE} = −12V, I_C = −2mA	160	—	800	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = −10mA, I_B = −1mA	—	−0.1	−0.5	V
Base to emitter voltage	V_{BE}	V_{CE} = −12V, I_C = −2mA	—	−0.66	−0.75	V
Gain bandwidth product	f_T	V_{CE} = −12V, I_E = 2mA	—	200	—	MHz
Collector output capacitance	C_{ob}	V_{CB} = −10V, I_E = 0, f = 1MHz	—	1.8	—	pF

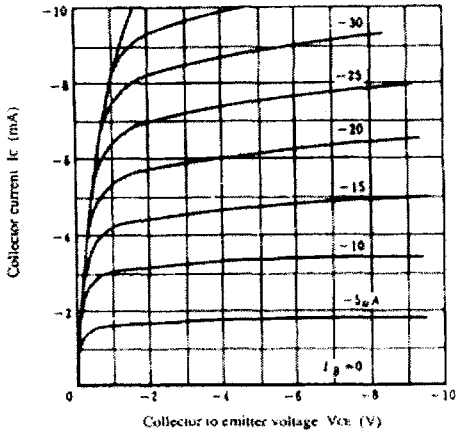
* The 2SB673(K) is grouped by h_{FE} as follows.

C	D	E
160 to 320	250 to 500	400 to 800

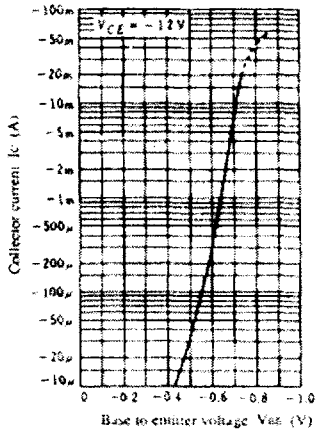
HITACHI

2SB637(K)

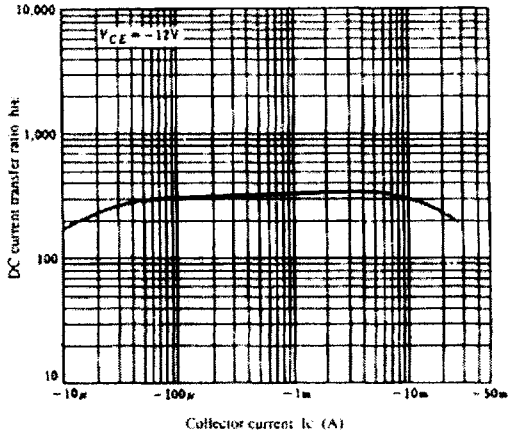
TYPICAL OUTPUT CHARACTERISTICS



TYPICAL TRANSFER CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE