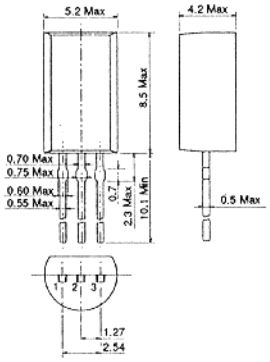
HITACHI

2SB715, 2SB716, 2SB716A

SILICON PNP EPITAXIAL

LOW FREQUENCY HIGH VOLTAGE AMPLIFIER
Complementary pair with 2SD755, 2SD756
and 2SD756A



1. Emitter
2. Collector
3. Base

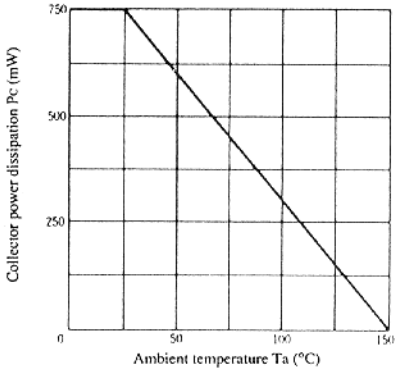
(Dimensions in mm)

(JEDEC TO-92 MOD.)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB715	2SB716	2SB716A	Unit
Collector to base voltage	V_{CBO}	−100	−120	−140	V
Collector to emitter voltage	V_{CEO}	−100	−120	−140	V
Emitter to base voltage	V_{EBO}	−5	−5	−5	V
Collector current	I_C	−50	−50	−50	mA
Collector power dissipation	P_C	750	750	750	mW
Junction temperature	T_j	150	150	150	°C
Storage temperature	T_{stg}	−55 to +150	−55 to +150	−55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

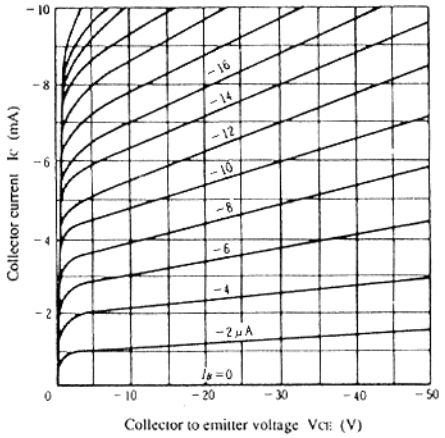
Item	Symbol	Test Condition	2SB715			2SB716			2SB716A			Unit
			min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = −10μA, I_E = 0	−100	—	—	−120	—	—	−140	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = −1mA, R_{BE} = ∞	−100	—	—	−120	—	—	−140	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = −80V, I_E = 0	—	—	−0.5	—	—	—	—	—	—	μA
		V_{CB} = −100V, I_E = 0	—	—	—	—	—	−0.5	—	—	−0.5	μA
DC current transfer ratio	h_{FE1}*	V_{CE} = −12V, I_C = −2mA	250	—	800	250	—	800	250	—	500	
	h_{FE2}	V_{CE} = −12V, I_C = −10mA	125	—	—	125	—	—	125	—	—	
Base to emitter voltage	V_{BE}	V_{CE} = −12V, I_C = −2mA	—	—	−0.75	—	—	−0.75	—	—	−0.75	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = −10mA, I_B = −1mA	—	—	−0.2	—	—	−0.2	—	—	−0.2	V
Gain bandwidth product	f_T	V_{CE} = −12V, I_C = −5mA	—	150	—	—	150	—	—	150	—	MHz
Collector output capacitance	C_{ob}	V_{CB} = −25V, I_E = 0, f = 1MHz	—	1.8	—	—	1.8	—	—	1.8	—	pF

* The 2SB715, 2SB716 and 2SB716A are grouped by h_{FE1} as follows.

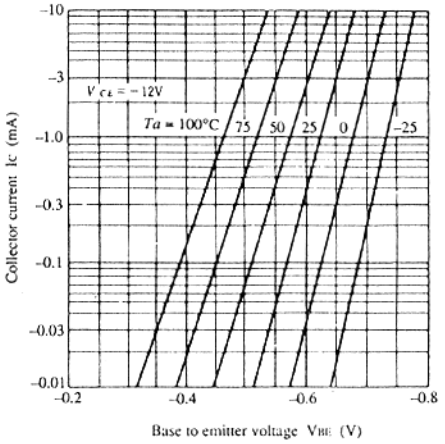
	D	E
2SB715,2SB716	250 to 500	400 to 800
2SB716A	250 to 500	—

2SB715, 2SB716, 2SB716A

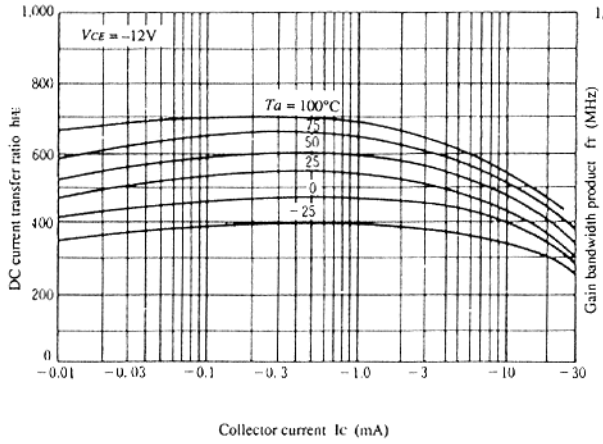
TYPICAL OUTPUT CHARACTERISTICS



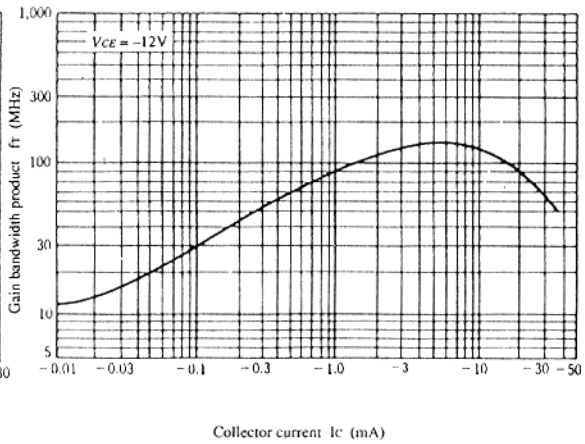
TYPICAL TRANSFER CHARATERISTICS



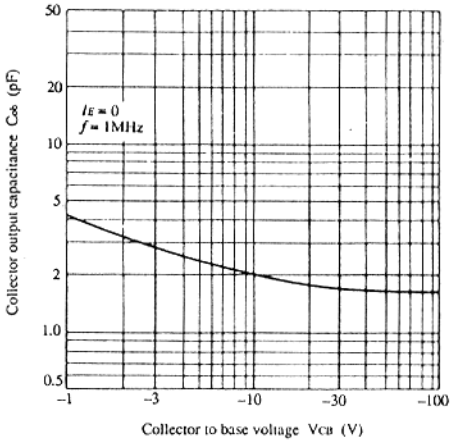
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



AREA OF SAFE OPERATION