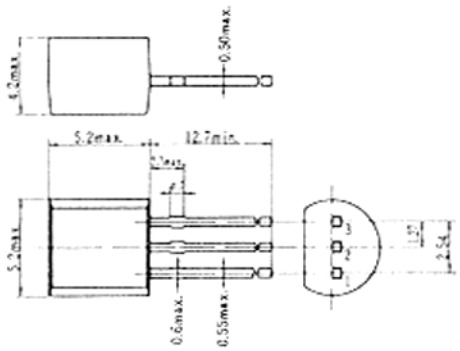
HITACHI

2SD655

SILICON NPN EPITAXIAL

LOW FREQUENCY POWER AMPLIFIER
MUTING

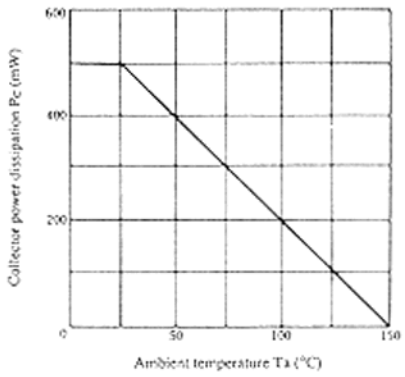


(JEDEC TO-92)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD655	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	15	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	0.7	A
Collector peak current	$i_{C(peak)}$	1.0	A
Collector power dissipation	P_C	500	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	–55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

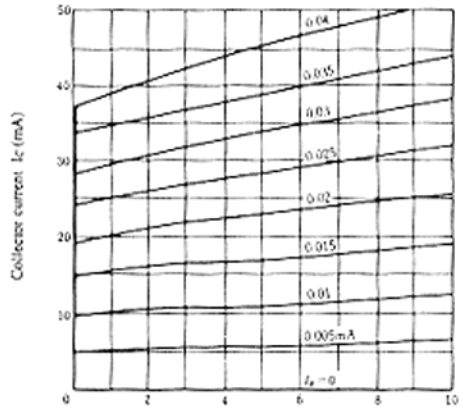
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = 10μA, I_E = 0	30	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	15	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0	5	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = 20V, I_E = 0	—	—	1.0	μA
Base to emitter voltage	V_{BE}	V_{CE} = 1V, I_C = 150mA	—	—	1.0	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 50mA**	—	0.15	0.5	V
DC current transfer ratio	h_{FE}*	V_{CE} = 1V, I_C = 150mA**	250	—	1200	
Gain bandwidth product	f_T	V_{CE} = 1V, I_C = 150mA	—	250	—	MHz

* The 2SD655 is grouped by h_{FE} as follows.
** Pulse Test

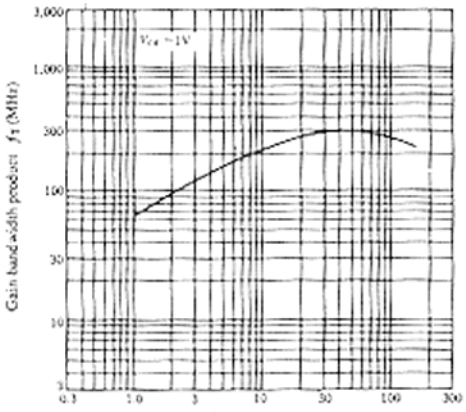
D	E	F
250 to 500	400 to 800	600 to 1200

2SD655

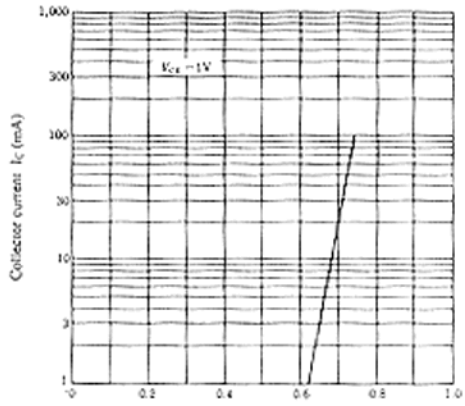
TYPICAL OUTPUT CHARACTERISTICS



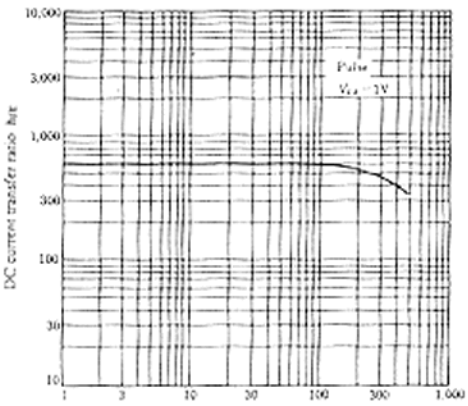
GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



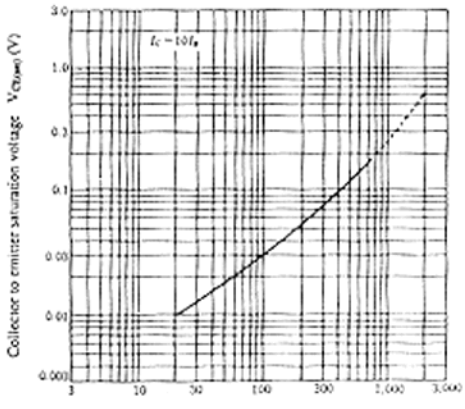
TYPICAL TRANSFER CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE