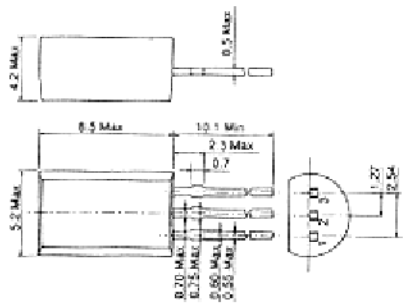
HITACHI

2SD1209Ⓚ

SILICON NPN EPITAXIAL

LOW FREQUENCY POWER AMPLIFIER
Complementary pair with 2SA1193Ⓚ



1. Emitter
2. Collector
3. Base

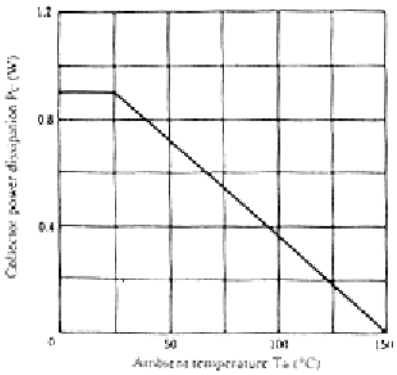
(Dimensions in mm)

(JEDEC TO-92 MOD.)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD1209Ⓚ	Unit
Collector to base voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	60	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	1	A
Collector peak current	$i_{C(peak)}$	2	A
Collector power dissipation	P_C	0.9	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE

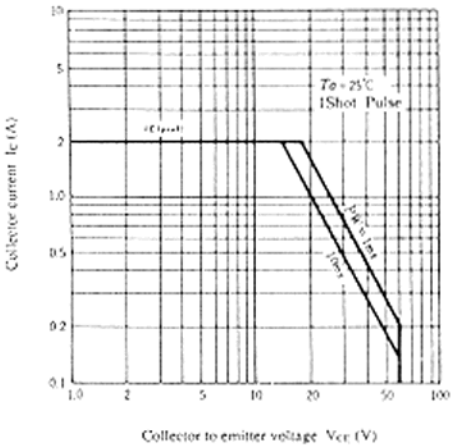


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

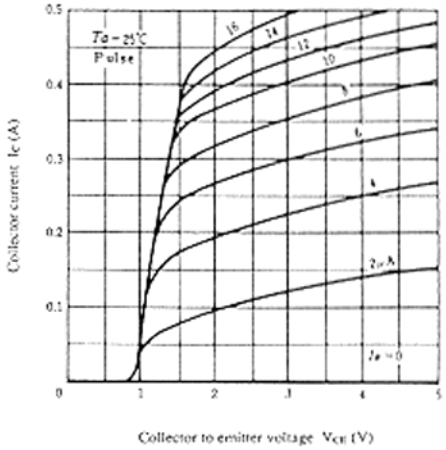
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = 0.1mA, I_E = 0	60	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = 60V, R_{BE} = ∞	—	—	100	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 7V, I_C = 0	—	—	100	μA
DC current transfer ratio	h_{FE}	V_{CE} = 3V, I_C = 0.5A*	4000	—	—	—
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 0.5mA*	—	—	1.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = 500mA, I_B = 0.5mA*	—	—	2.0	V

* Pulse Test

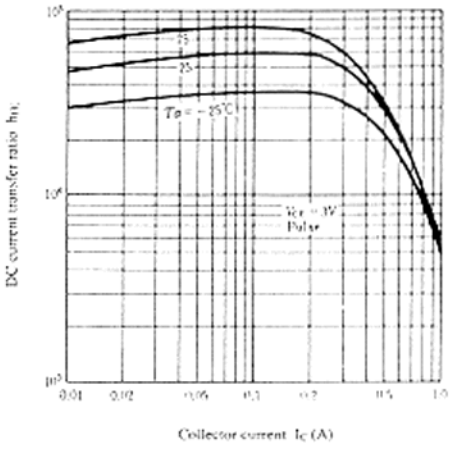
AREA OF SAFE OPERATION



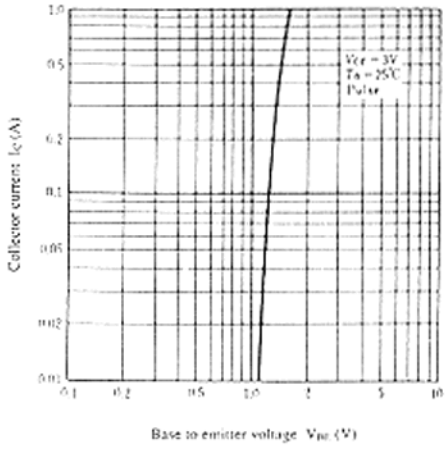
TYPICAL OUTPUT CHARACTERISTICS



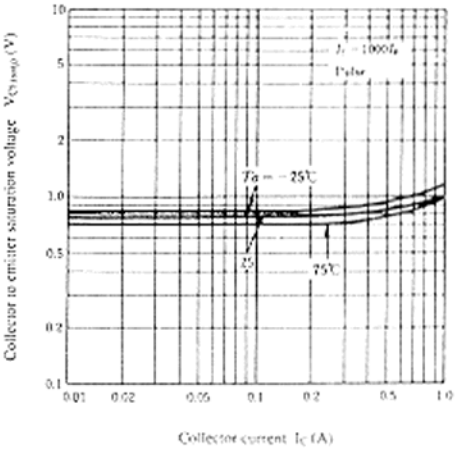
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



TYPICAL TRANSFER CHARACTERISTICS



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



BASE TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT