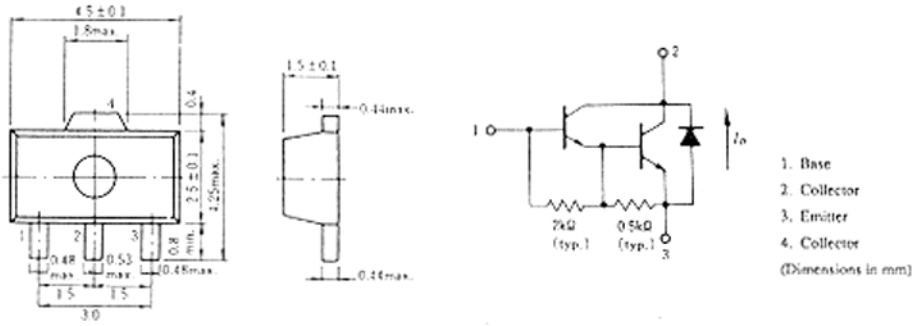
HITACHI

# 2SD1472

SILICON NPN EPITAXIAL

LOW FREQUENCY POWER AMPLIFIER




(UPAK)

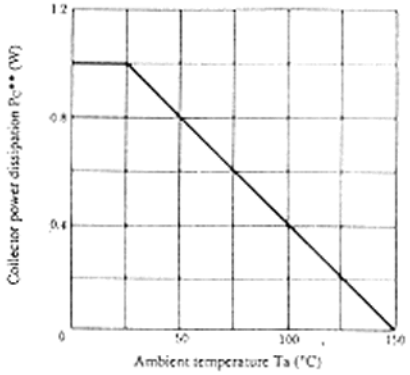
## ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| Item | Symbol | 2SD1472 | Unit |
|---|---|---|---|
| Collector to base voltage | $V_{CBO}$ | 120 | V |
| Collector to emitter voltage | $V_{CEO}$ | 120 | V |
| Emitter to base voltage | $V_{EBO}$ | 7 | V |
| Collector current | $I_C$ | 1.5 | A |
| Collector peak current | $i_{C(peak)}$* | 3.0 | A |
| Collector power dissipation | $P_C$** | 1.0 | W |
| Junction temperature | $T_j$ | 150 | °C |
| Storage temperature | $T_{stg}$ | −55 to +150 | °C |
| C to E diode forward current | $I_D$ | 1.5 | A |

* Pulse ≤10ms, Duty cycle ≤20%.

** Value on the alumina ceramic board (12.5×30×0.7mm)

MAXIMUM COLLECTOR POWER DISSIPATION CURVE



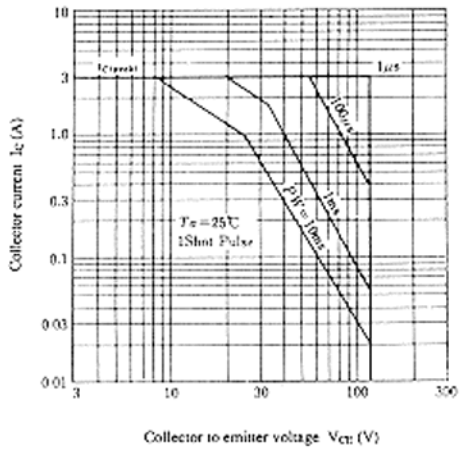

## ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

| Item | Symbol | Test Condition | min. | typ. | max. | Unit |
|---|---|---|---|---|---|---|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | $I_C$ = 0.1mA, $I_E$ = 0 | 120 | — | — | V |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C$ = 10mA, $R_{BE}$ = ∞ | 120 | — | — | V |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | $I_E$ = 50mA, $I_C$ = 0 | 7 | — | — | V |
| Collector cutoff current | $I_{CBO}$ | $V_{CB}$ = 100V, $I_E$ = 0 | — | — | 1.0 | μA |
| | $I_{CEO}$ | $V_{CE}$ = 100V, $R_{BE}$ = ∞ | — | — | 10 | μA |
| DC current transfer ratio | $h_{FE}$ | $V_{CE}$ = 3V, $I_C$ = 1A* | 2000 | — | 30000 | — |
| Collector to emitter saturation voltage | $V_{CE(sat)1}$ | $I_C$ = 1A, $I_B$ = 1mA* | — | — | 1.5 | V |
| | $V_{CE(sat)2}$ | $I_C$ = 1.5A, $I_B$ = 1.5mA* | — | — | 2.0 | V |
| Base to emitter saturation voltage | $V_{BE(sat)1}$ | $I_C$ = 1A, $I_B$ = 1mA* | — | — | 2.0 | V |
| | $V_{BE(sat)2}$ | $I_C$ = 1.5A, $I_B$ = 1.5mA* | — | — | 2.5 | V |
| C to E diode forward voltage | $V_D$ | $I_D$ = 1.5A* | — | — | 3.0 | V |

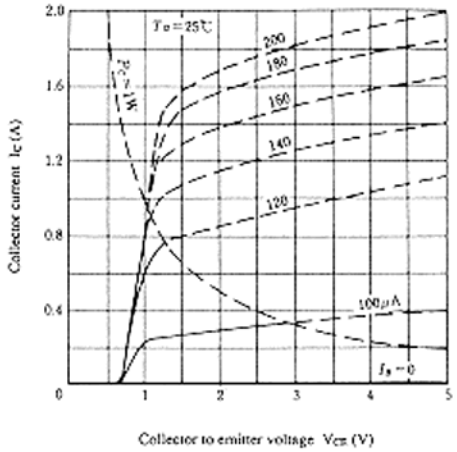
* Pulse Test

** Marking is [CT].

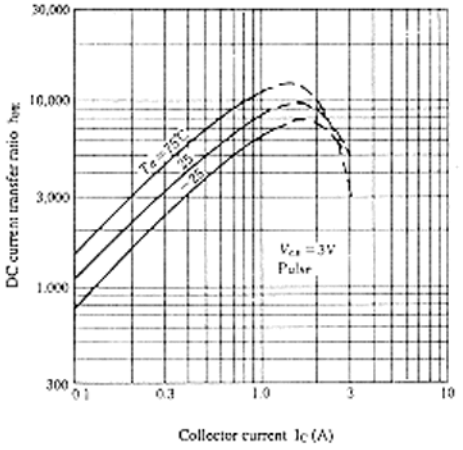
## AREA OF SAFE OPERATION



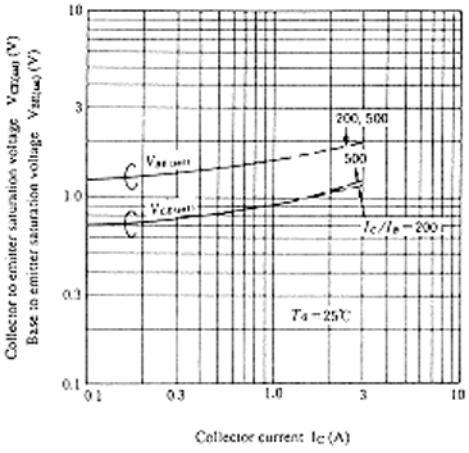

## TYPICAL OUTPUT CHARACTERISTICS




## DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT




## SATURATION VOLTAGE VS. COLLECTOR CURRENT




## TRANSIENT THERMAL RESISTANCE