# KTB688

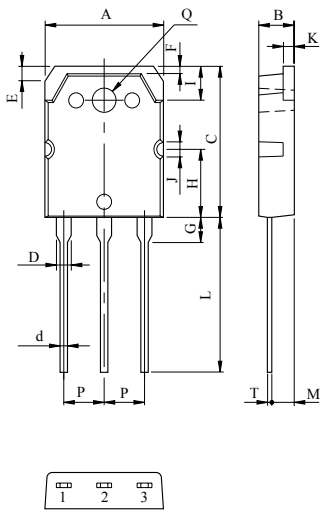
## TRIPLE DIFFUSED PNP TRANSISTOR

HIGH POWER AMPLIFIER APPLICATION.

FEATURES

· Complementary to KTD718.

· Recommended for 45～50W Audio Frequency Amplifier Output Stage.




| DIM | MILLIMETERS |
|---|---|
| A | 15.9 MAX |
| B | 4.8 MAX |
| C | 20.0±0.3 |
| D | 2.0±0.3 |
| d | 1.0+0.3/-0.25 |
| E | 2.0 |
| F | 1.0 |
| G | 3.3 MAX |
| H | 9.0 |
| I | 4.5 |
| J | 2.0 |
| K | 1.8 MAX |
| L | 20.5±0.5 |
| M | 2.8 |
| P | 5.45±0.2 |
| Q | Φ3.2±0.2 |
| T | 0.6+0.3/-0.1 |

1. BASE
2. COLLECTOR
3. EMITTER

TO-3P(N)

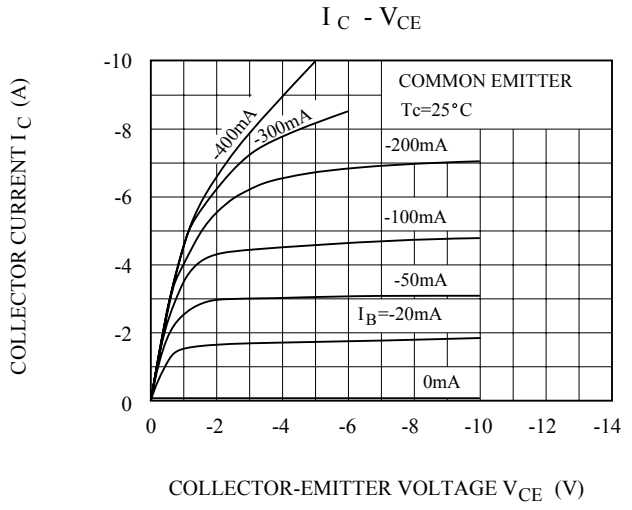
MAXIMUM RATING (Ta=25℃)

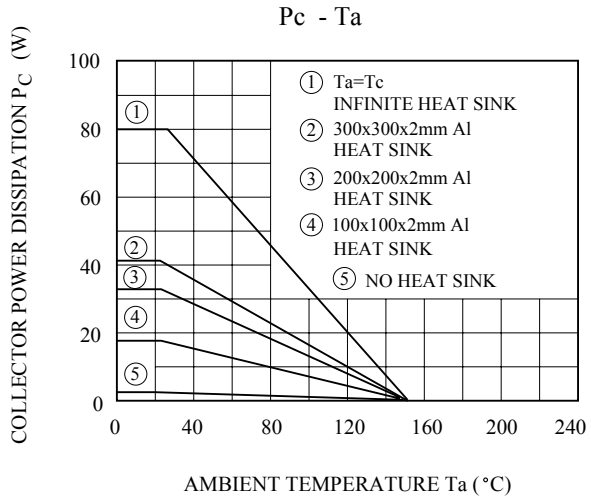
| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | -120 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | -120 | V |
| Emitter-Base Voltage | $V_{EBO}$ | -5 | V |
| Collector Current | $I_C$ | -10 | A |
| Base Current | $I_B$ | -1 | A |
| Collector Power Dissipation (Tc=25℃) | $P_C$ | 80 | W |
| Junction Temperature | $T_j$ | 150 | ℃ |
| Storage Temperature Range | $T_{stg}$ | -55～150 | ℃ |

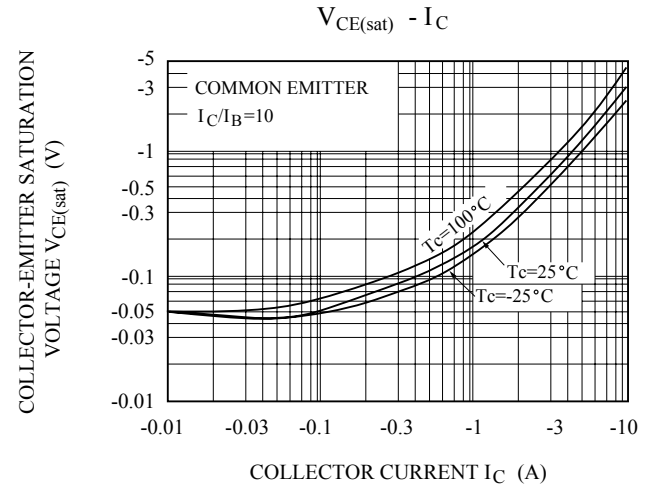
ELECTRICAL CHARACTERISTICS (Ta=25℃)

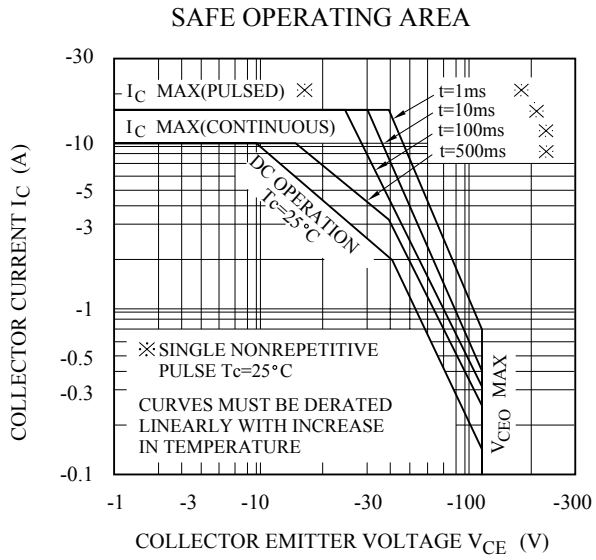
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Collector Cut-off Current | $I_{CBO}$ | $V_{CB}$=-120V, $I_E$=0 | - | - | -10 | μA |
| Emitter Cut-off Current | $I_{EBO}$ | $V_{EB}$=-5V, $I_C$=0 | - | - | -10 | μA |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C$=-50mA, $I_B$=0 | -120 | - | - | V |
| DC Current Gain | $h_{FE}$ (Note) | $V_{CE}$=-5V, $I_C$=-1A | 55 | - | 160 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=-5A, $I_B$=-0.5A | - | - | -2.5 | V |
| Base-Emitter Voltage | $V_{BE}$ | $V_{CE}$=-5V, $I_C$=-5A | - | - | -1.5 | V |
| Transition Frequency | $f_T$ | $V_{CE}$=-5V, $I_C$=-1A | - | 10 | - | MHz |
| Collector Output Capacitance | $C_{ob}$ | $V_{CB}$=-10V, $I_E$=0, f=1MHz | - | 280 | - | pF |

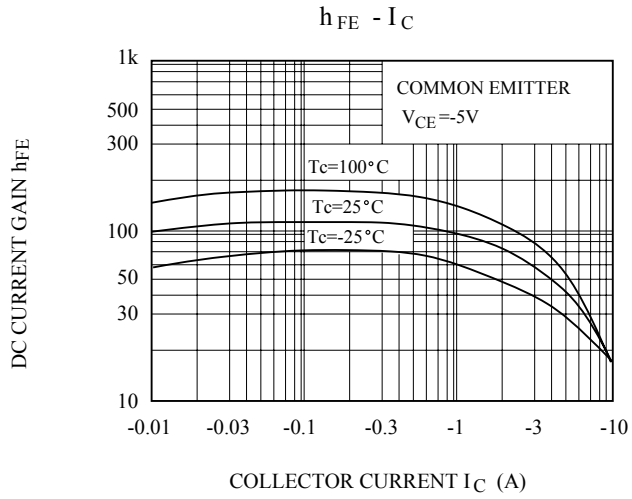
Note : $h_{FE}$ Classification R:55～110, O:80～160


I C - VCE
COMMON EMITTER
Tc=25°C
-400mA
-300mA
-200mA
-100mA
-50mA
IB=-20mA
0mA
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)


Pc - Ta
① Ta=Tc
INFINITE HEAT SINK
② 300x300x2mm Al
HEAT SINK
③ 200x200x2mm Al
HEAT SINK
④ 100x100x2mm Al
HEAT SINK
⑤ NO HEAT SINK
COLLECTOR POWER DISSIPATION PC (W)
AMBIENT TEMPERATURE Ta (°C)


VCE(sat) - IC
COMMON EMITTER
IC/IB=10
Tc=100°C
Tc=25°C
Tc=-25°C
COLLECTOR-EMITTER SATURATION
VOLTAGE VCE(sat) (V)
COLLECTOR CURRENT IC (A)


SAFE OPERATING AREA
IC MAX(PULSED) ※
IC MAX(CONTINUOUS)
t=1ms ※
t=10ms ※
t=100ms ※
t=500ms ※
DC OPERATION
Tc=25°C
※SINGLE NONREPETITIVE
PULSE Tc=25°C
CURVES MUST BE DERATED
LINEARLY WITH INCREASE
IN TEMPERATURE
VCEO MAX
COLLECTOR CURRENT IC (A)
COLLECTOR EMITTER VOLTAGE VCE (V)


hFE - IC
COMMON EMITTER
VCE=-5V
Tc=100°C
Tc=25°C
Tc=-25°C
DC CURRENT GAIN hFE
COLLECTOR CURRENT IC (A)