



CHENMKO ENTERPRISE CO.,LTD

2SA1036KPT

SURFACE MOUNT

Medium Power PNP Transistor

VOLTAGE 32 Volts CURRENT 0.5 Ampere

Lead free devices

APPLICATION

* Medium Power Amplifier .

FEATURE

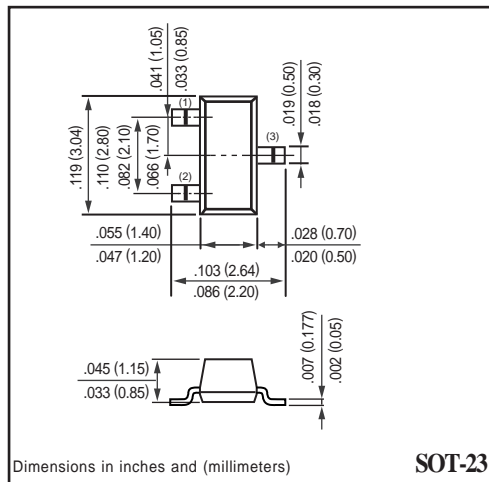
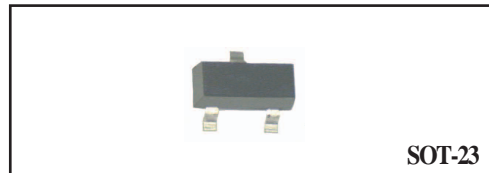
- * Surface mount package. (SOT-23)
- * Low saturation voltage V
- * Low cob. Cob=7.0pF(Typ. $C_{E(sat)}$ =-0.4V(max.)(Ic=-100mA)
- * Pc= 200mW (mounted on ceramic substrate).
- * High saturation current capability.

CONSTRUCTION

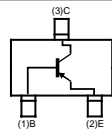
- * PNP Silicon Transistor
- * Epitaxial planner type

MARKING

- * HFE(P):ST
- * HFE(Q):TT
- * HFE(R):2F-



CIRCUIT



MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS | CONDITION | SYMBOL | MIN. | MAX. | UNITS |
|-------------------------------|-------------------|--------|------|------|-------|
| Collector - Base Voltage | Open Emitter | VcBo | - | -40 | Volts |
| Collector - Emitter Voltage | Open Base | VcEO | - | -32 | Volts |
| Emitter - Base Voltage | Open Collector | VEBO | - | -5 | Volts |
| Collector Current DC | | Ic | - | -500 | mAmps |
| Peak Collector Current | | ICM | - | -500 | mAmps |
| Peak Base Current | | IBM | - | -10 | mAmps |
| Total Power Dissipation | TA ≤ 25°C; Note 1 | PTOT | - | 300 | mW |
| Storage Temperature | | TSTG | -55 | +150 | °C |
| Junction Temperature | | TJ | - | +150 | °C |
| Operating Ambient Temperature | | TAMB | -55 | +150 | °C |

Note

1. Transistor mounted on ceramic substrate 50mmX50mmx0.8t.
2. Measured at Pulse Width 300 us, Duty Cycle 2%.

RATING CHARACTERISTICS (2SA1036KPT)

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETERS | CONDITION | SYMBOL | MIN. | TYPE | MAX. | UNITS |
|--------------------------------------|---|-------------|------|------|------|---------------|
| Collector Cut-off Current | $I_E=0; V_{CB}=-20\text{V}$ | I_{CBO} | - | - | -1.0 | μA |
| Emitter Cut-off Current | $I_C=0; V_{EB}=-4\text{V}$ | I_{CEO} | - | - | -1.0 | μA |
| DC Current Gain | $V_{CE}=-3\text{V}$; Note 1 $I_C=-10\text{mA}$; Note 2 | h_{FE} | 82 | - | 390 | |
| Collector-Emitter Saturation Voltage | $I_C=-100\text{mA}; I_B=-10\text{mA}$ | V_{CEsat} | - | - | -0.4 | Volts |
| Base-Emitter Saturatio Voltage | $I_C=-100\text{mA}; I_B=-10\text{mA}$ | V_{BEsat} | - | - | -1.1 | mVolts |
| Output Collector Capacitance | $I_E=I_C=0; V_{CB}=-10\text{V}; f=1\text{MHz}$ | C_{ob} | - | 7 | - | pF |
| Transition Frequency | $I_C=2\text{mA}; V_{CE}=-10\text{V}; f=100\text{MHz}$ | f_T | - | 200 | - | MHz |

Note :

1. Pulse test: $t_p \leq 300\mu\text{Sec}$; $\delta \leq 0.02$.
2. h_{FE} : Classification P: 82 to 180, Q: 120 to 270, R: 180 to 390

RATING CHARACTERISTIC CURVES (2SA1036KPT)

Fig.1 Grounded emitter propagation characteristics

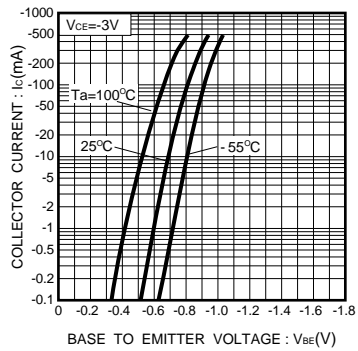


Fig.2 Grounded emitter output characteristics (1)

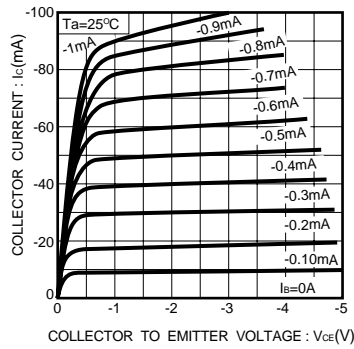
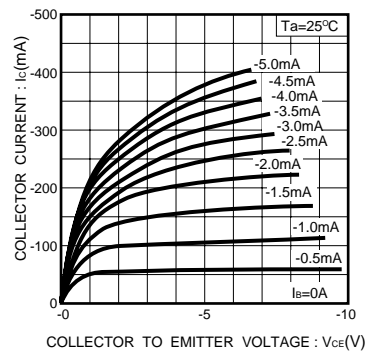


Fig.3 Grounded emitter output characteristics (2)



RATING CHARACTERISTIC CURVES (2SA1036KPT)

Fig.4 Collector-emitter saturation voltage vs. collector current

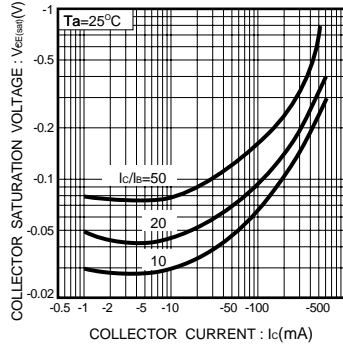


Fig.5 Collector-emitter saturation voltage vs. collector current

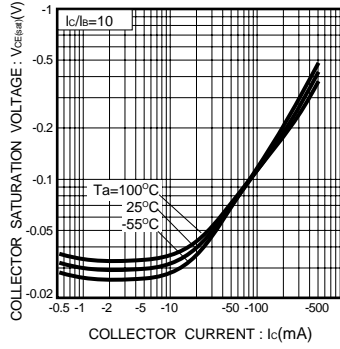


Fig.6 DC current gain vs. collector current

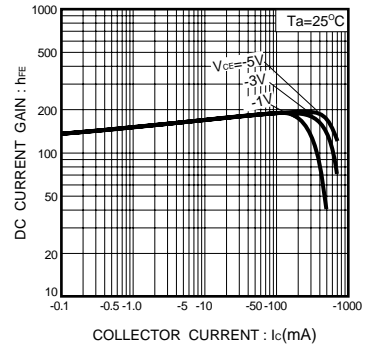


Fig.7 DC current gain vs. collector current

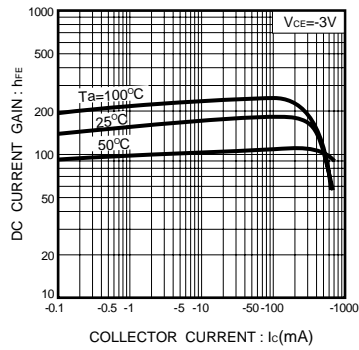


Fig.8 Gain bandwidth product vs. emitter current

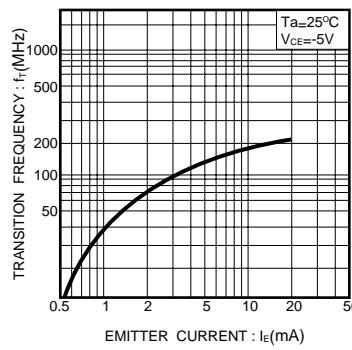


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

