CHENMKO ENTERPRISE CO.,LTD

2SA1036KPT

Lead free devices

SURFACE MOUNT
Medium Power PNP Transistor

VOLTAGE 32 Volts CURRENT 0.5 Ampere

APPLICATION

* Medium Power Amplifier .

FEATURE

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

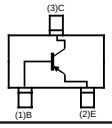
CONSTRUCTION

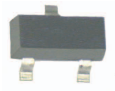
* PNP Silicon Transistor
* Epitaxial planner type

MARKING

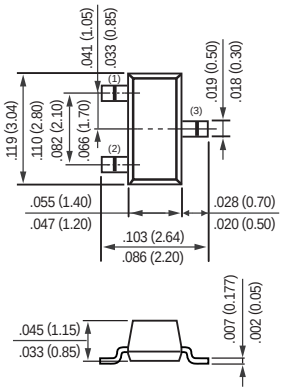
* HFE(P):ST
* HFE(Q):TT
* HFE(R):2F-

CIRCUIT





SOT-23



Dimensions in inches and (millimeters)

SOT-23

MAXIMUM RATINGES (At T$_A$ = 25^{o}C unless otherwise noted)

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V$_{CBO}$	-	-40	Volts
Collector - Emitter Voltage	Open Base	V$_{CEO}$	-	-32	Volts
Emitter - Base Voltage	Open Collector	V$_{EBO}$	-	-5	Volts
Collector Current DC		I$_C$	-	-500	mAmps
Peak Collector Current		I$_{CM}$	-	-500	mAmps
Peak Base Current		I$_{BM}$	-	-10	mAmps
Total Power Dissipation	T$_A$ ≤ 25^{o}C; Note 1	P$_{TOT}$	-	300	mW
Storage Temperature		T$_{STG}$	-55	+150	^{o}C
Junction Temperature		T$_J$	-	+150	^{o}C
Operating Ambient Temperature		T$_{AMB}$	-55	+150	^{o}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°C unless otherwise noted)

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

Note :
1. Pulse test: tp ≤ 300uSec; δ ≤ 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

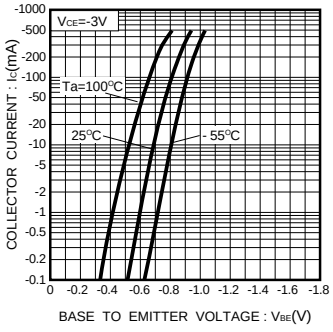


Fig.2 Grounded emitter output characteristics (1)

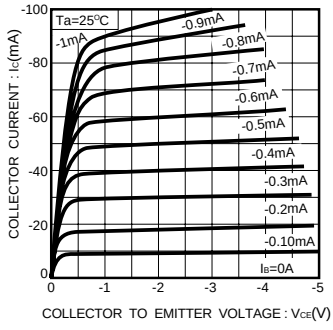
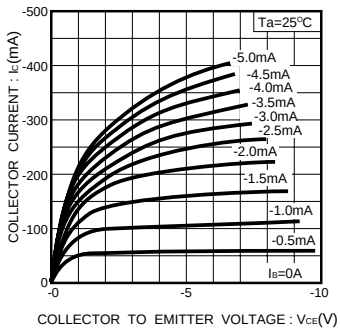


Fig.3 Grounded emitter output characteristics (2)



RATING CHARACTERISTIC CURVES (2SA1036KPT)

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

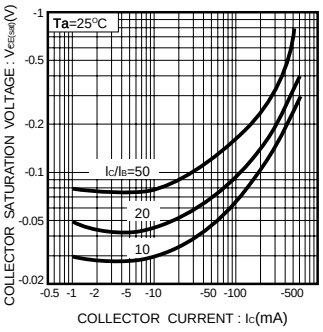


Fig.5 Collector-emitter saturation voltage vs. collector current

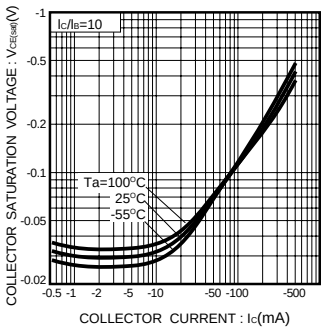


Fig.6 DC current gain vs. collector current

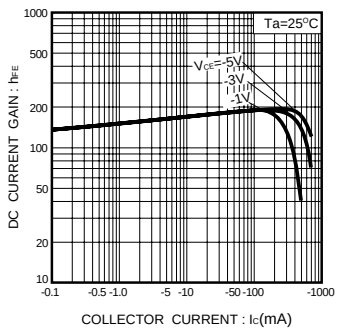


Fig.7 DC current gain vs. collector current

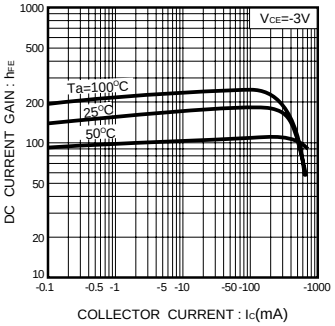


Fig.8 Gain bandwidth product vs. emitter current

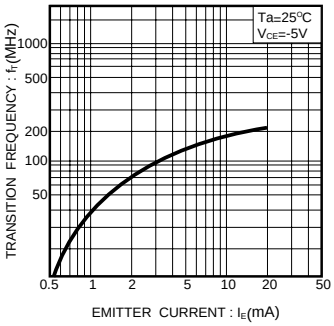


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

