CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT
Medium Power NPN Transistor
VOLTAGE 32 Volts CURRENT 0.5 Ampere

2SC2411KPT

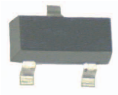
Lead free devices

APPLICATION
* Medium Power Amplifier .

FEATURE
* Surface mount package. (SOT-23)
* Low saturation voltage V
* Low cob. Cob=6.0pF(Typ.) $V_{CE(sat)}$=0.4V(max.)(I_C=500mA)
* P_C= 200mW (mounted on ceramic substrate).
* High saturation current capability.

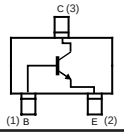
CONSTRUCTION
* NPN Silicon Transistor
* Epitaxial planner type

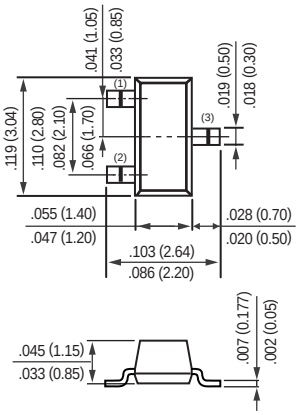
MARKING
* HFE(P):PT
* HFE(Q):NC
* HFE(R):1P-



SOT-23

CIRCUIT





Dimensions in inches and (millimeters)

SOT-23

MAXIMUM RATINGES (At T_A = 25°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	$T_A \leq 25^oC$; Note 1	P_{TOT}	-	350	mW
Storage Temperature		T_{STG}	-55	+150	°C
Junction Temperature		T_J	-	+150	°C
Operating Ambient Temperature		T_{AMB}	-55	+150	°C

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

2002-10

RATING CHARACTERISTICS (2SC2411KPT)

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=100mA; Note 2	h_{FE}	82	-	390	
Collector-Emitter Saturation Voltage	I_C=500mA; I_B=50mA	V_{CEsat}	-	-	0.4	Volts
Base-Emitter Saturatio Voltage	I_C=500mA; I_B=50mA	V_{BEsat}	-	-	1.1	Volts
Output Collector Capacitance	I_E=ie=0; V_{CB}=12V; f=1MHz	C_{ob}	-	6.0	-	pF
Transition Frequency	I_C=20mA; V_{CE}=5V; f=100MHz	f_T	-	250	-	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 (2SC2411KPT)

Fig.1 Grounded emitter propagation characteristics

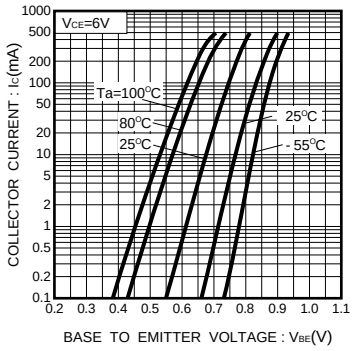


Fig.2 Grounded emitter output characteristics (1)

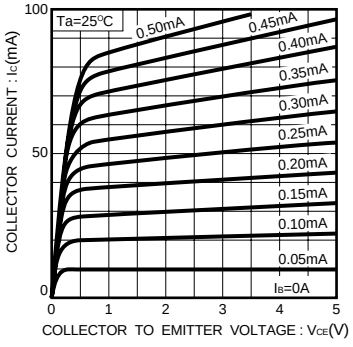
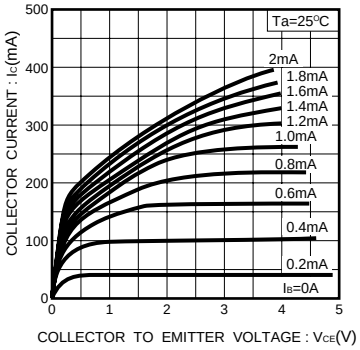


Fig.3 Grounded emitter output characteristics (2)



RATING CHARACTERISTIC CURVES (2SC2411KPT)

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

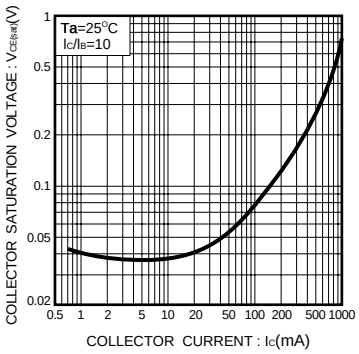


Fig.5 DC current gain vs. collector current

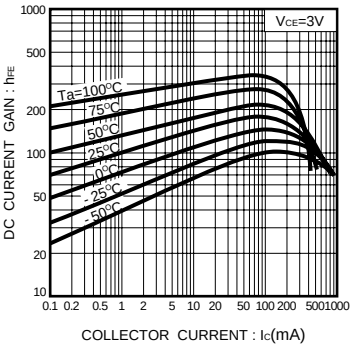


Fig. 6 Gain bandwidth product vs. emitter current

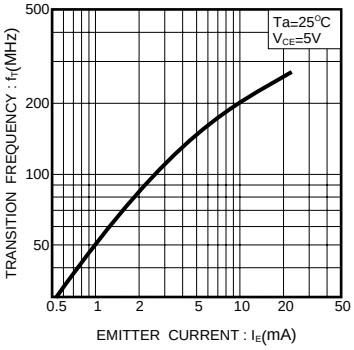


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage