CHENMKO ENTERPRISE CO.,LTD

CHUMY1PT

Lead free devices

SURFACE MOUNT
Dual Silicon Transistor

VOLTAGE 50 Volts CURRENT 150 mAmpere

APPLICATION

* Small Signal Amplifier .

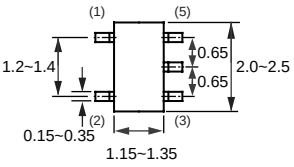
FEATURE

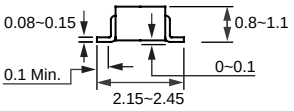
* Small surface mounting type. (SC-88A/SOT-353)
* P_C= 150mW (Total).
* High saturation current capability.
* Includes a 2SC2412K and a 2SA1037K in one package.

MARKING

* UY1

SC-88A/SOT353

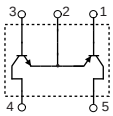




Dimensions in millimeters

SC-88A/SOT353

CIRCUIT



NPN Transistor 2SC2412K LIMITING VALUES

MAXIMUM RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	-	60	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	-	50	Volts
Emitter - Base Voltage	Open Collector	V_{EBO}	-	7	Volts
Collector Current DC		I_C	-	150	mAmps
Peak Collector Current		I_{CM}	-	150	mAmps
Peak Base Current		I_{BM}	-	15	mAmps
Total Power Dissipation	$T_A \leq 25^oC$; Note 1	P_{TOT}	-	150	mW
Storage Temperature		T_{STG}	-55	+150	°C
Junction Temperature		T_J	-	+150	°C
Operating Ambient Temperature		T_{AMB}	-55	+150	°C

Note

2004-11

1. Transistor mounted on ceramic substrate 50mmX50mmx0.8t.

PNP Transistor 2SA1037K LIMITING VALUES

MAXIMUM RATINGES (At T_A = 25 C unless otherwise noted)

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	-	-60	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	-	-50	Volts
Emitter - Base Voltage	Open Collector	V_{EBO}	-	-6	Volts
Collector Current DC		I_C	-	-150	mAmps
Peak Collector Current		I_{CM}	-	-150	mAmps
Peak Base Current		I_{BM}	-	-15	mAmps
Total Power Dissipation	$T_A \leq 25^oC$; Note 2	P_{TOT}	-	150	mW
Storage Temperature		T_{STG}	-55	+150	^oC
Junction Temperature		T_J	-	+150	^oC
Operating Ambient Temperature		T_{AMB}	-55	+150	^oC

Note

2. Transistor mounted on ceramic substrate 50mmX50mmx0.8t.

2SC2412K CHARACTERISTICS

ELECTRICAL CHARACTERISTICS (At T_A = 25^{o}C unless otherwise noted)

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector-base breakdown voltage	I_C=50uA	BV_{CBO}	60	-	-	Volts
Collector-emitter breakdown voltage	I_C=1mA	BV_{CEO}	50	-	-	Volts
Emitter-base breakdown voltage	I_E=50uA	BV_{EBO}	7	-	-	Volts
Collector Cut-off Current	I_E=0; V_{CB}=60V	I_{CBO}	-	-	0.1	
Emitter Cut-off Current	I_C=0; V_{EB}=7V	I_{CEO}	-	-	0.1	uA
DC Current Gain	V_{CE}=6V I_C=1mA	h_{FE}	120	-	560	
Collector-Emitter Saturation Voltage	I_C=50mA; I_B=5mA	V_{CEsat}	-	-	0.4	Volts
Output Collector Capacitance	I_E=ie=0; V_{CB}=12V; f=1MHz	C_{ob}	-	2	3.5	pF
Transition Frequency	I_C=2mA; V_{CE}=12V; f=100MHz	f_T	-	180	-	MHz

2SA1037K CHARACTERISTICS

ELECTRICAL CHARACTERISTICS (At T_A = 25^{o}C unless otherwise noted)

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector-base breakdown voltage	I_C=-50uA	BV_{CBO}	-60	-	-	Volts
Collector-emitter breakdown voltage	I_C=-1mA	BV_{CEO}	-50	-	-	Volts
Emitter-base breakdown voltage	I_E=-50uA	BV_{EBO}	-6	-	-	Volts
Collector Cut-off Current	I_E=0; V_{CB}=-60V	I_{CBO}	-	-	-0.1	
Emitter Cut-off Current	I_C=0; V_{EB}=-6V	I_{EBO}	-	-	-0.1	uA
DC Current Gain	V_{CE}=-6V I_C=-1mA	h_{FE}	120	-	560	
Collector-Emitter Saturation Voltage	I_C=-50mA; I_B=-5mA	V_{CEsat}	-	-	-0.5	Volts
Output Collector Capacitance	I_E=ie=0; V_{CB}=-12V; f=1MHz	C_{ob}	-	4	5.0	pF
Transition Frequency	I_E=2mA; V_{CE}=-12V; f=100MHz	f_T	-	140	-	MHz

RATING CHARACTERISTIC CURVES (CHUMY1PT)

2SC2412K Typical Electrical Characteristics

Fig.1 Grounded emitter propagation characteristics

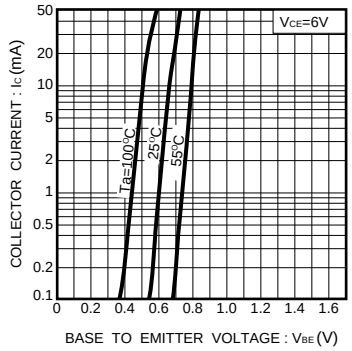


Fig.2 Grounded emitter output characteristics

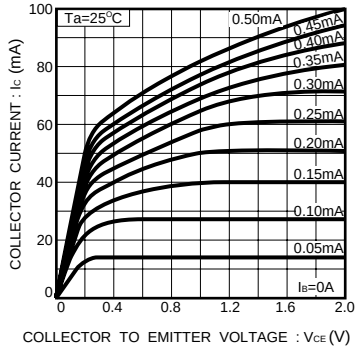


Fig.3 DC current gain vs. collector current (1)

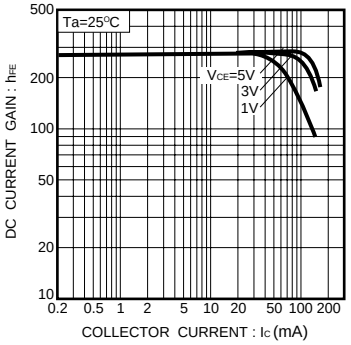


Fig.4 DC current gain vs. collector current (2)

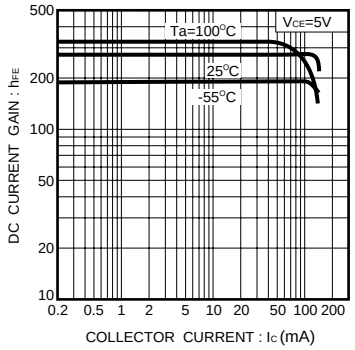


Fig. 5 Collector-emitter saturation voltage vs. collector current

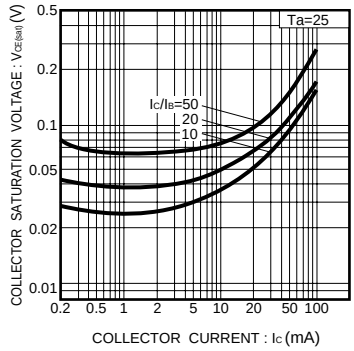


Fig.6 Collector-emitter saturation voltage vs. collector current

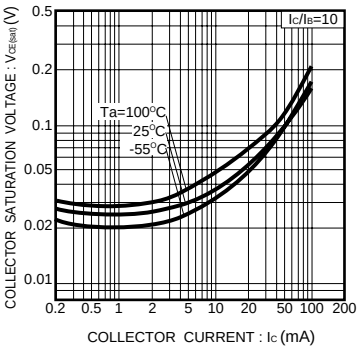


Fig.7 Gain bandwidth product vs. emitter current

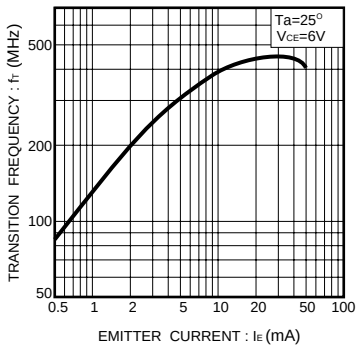
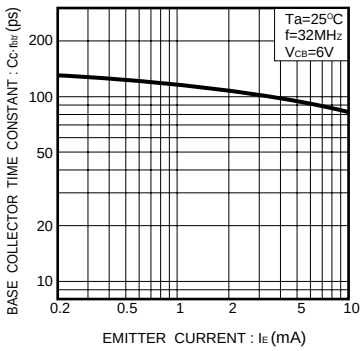


Fig.8 Base-collector time constant vs. emitter current



RATING CHARACTERISTIC CURVES (CHUMY1PT)

2SA1037K Typical Electrical Characteristics

Fig.1 Grounded emitter propagation characteristics

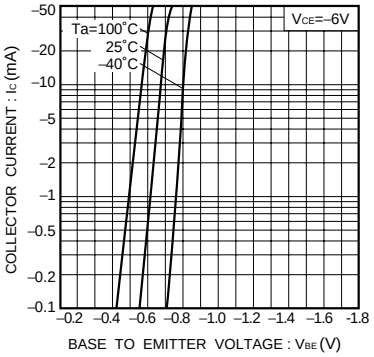


Fig.2 Grounded emitter output characteristics

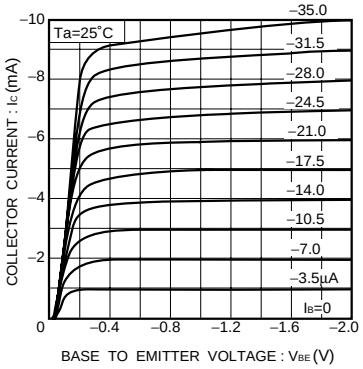


Fig.3 DC current gain vs. collector current (1)

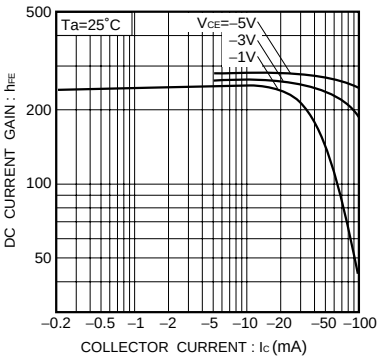


Fig.4 DC current gain vs. collector current (2)

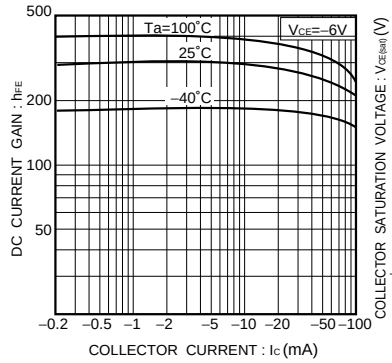


Fig. 5 Collector-emitter saturation voltage vs. collector current

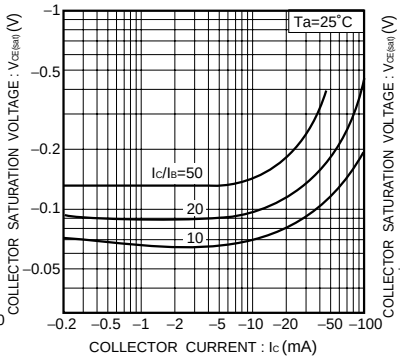


Fig.6 Collector-emitter saturation voltage vs. collector current

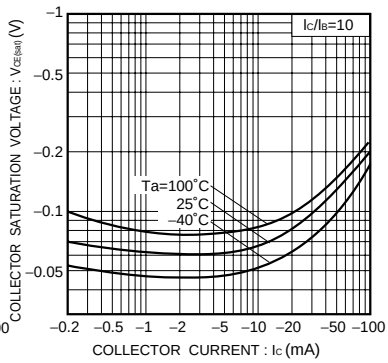


Fig.7 Gain bandwidth product vs. emitter current