CHENMKO ENTERPRISE CO.,LTD

CH857SPT

Lead free devices

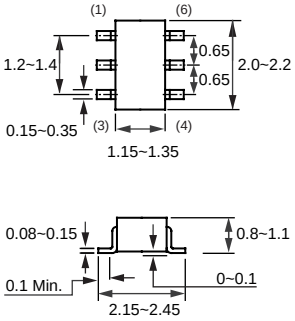
SURFACE MOUNT
PNP Muti-Chip General Purpose Amplifier
VOLTAGE 45 Volts CURRENT 0.1 Ampere

APPLICATION
* AF input stages and driver applicationon equipment.
* Other general purpose applications.

FEATURE
* Small surface mounting type. (SC-88/SOT-363)
* High current gain.
* Suitable for high packing density.
* Low colloector-emitter saturation.
* High saturation current capability.
* Two internal isolated PNP transistors in one package.

CONSTRUCTION
* Two PNP transistors in one package.

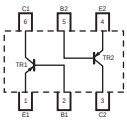
SC-88/SOT-363



Dimensions in millimeters

SC-88/SOT-363

CIRCUIT



LIMITING VALUES
In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	-50	V
V_{CEO}	collector-emitter voltage	open base	–	-45	V
V_{CES}	collector-base voltage	open emitter	–	-50	V
V_{EBO}	emitter-base voltage	open collector	–	-5	V
I_C	collector current (DC)		–	-100	mA
I_{CM}	peak collector current		–	-200	mA
I_{BM}	peak base current		–	-2	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C; note 1	–	300	mW
T_{stg}	storage temperature		–55	+150	°C
T_j	junction temperature		–	150	°C
T_{amb}	operating ambient temperature		–55	+150	°C

Note

1. Transistor mounted on an FR4 printed-circuit board.

RATING CHARACTERISTIC (CH857SPT)

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}s}$	thermal resistance from junction to ambient	note 1	415	K/W

Note

1. Transistor mounted on an FR4 printed-circuit board.

CHARACTERISTICS

T_{amb} = 25 °C unless otherwise speciÞed.

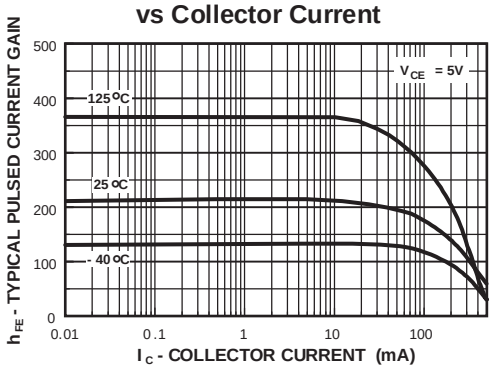
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CBO}	collector cut-off current	I_E = 0; V_{CB} = 30 V	–	–	-15	nA
		I_C = 0; V_{CB} = 30 V; T_A = 150 °C	–	–	-4.0	uA
I_{EBO}	emitter cut-off current	I_C = 0; V_{EB} = - 4 V	–	–	-15	nA
h_{FE}	DC current gain	I_C = -2.0 mA; V_{CE} = -5.0V; note 1	125	–	630	
V_{CEsat}	collector-emitter saturation voltage	I_C = -10 mA ; I_B = -0.5 mA	–	–	-300	mV
		I_C = -100 mA ; I_B = -5 mA	–	–	-650	mV
V_{BEsat}	base-emitter saturation voltage	I_C = -2.0 mA;V_{CE} =- 5.0 V	-600	–	-750	mV
		I_C = -10 mA;V_{CE} = -5.0 V	–	–	-820	mV
C_c	collector capacitance	I_E = i_e = 0; V_{CB} = -10V; f = 1 MHz	–	3.5	–	pF
f_T	transition frequency	I_C = -10mA; V_{CE} = - 5V ; f = 100 MHz	–	200	–	MHz
NF	noise figure	I_C = -0.2 mA; V_{CE} = - 5V;Rs = 2.0KΩ f = 1.0 KHz; BW = 200KHz	–	2.5	–	dB

Note

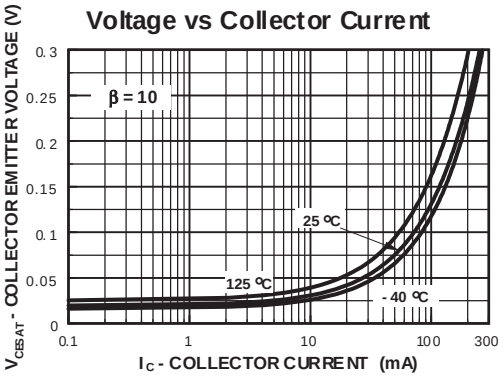
1. Pulse test: $t_p \leq 300\ \mu s$; $\delta \leq 0.02$.

RATING CHARACTERISTIC CURVES (CH857SPT)

Typical Pulsed Current Gain vs Collector Current

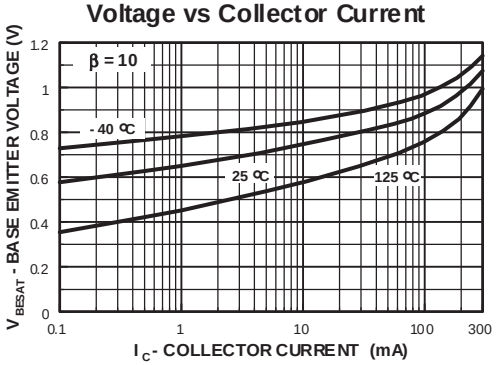


Collector-Emitter Saturation Voltage vs Collector Current

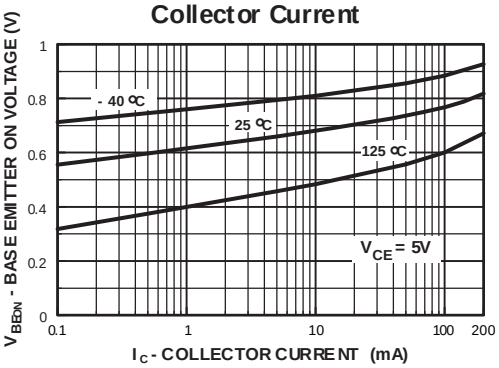


RATING CHARACTERISTIC CURVES (CH857SPT)

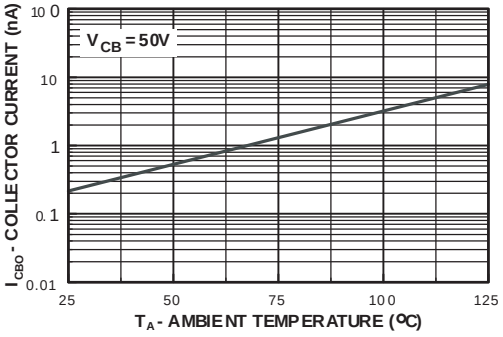
Base-Emitter Saturation Voltage vs Collector Current



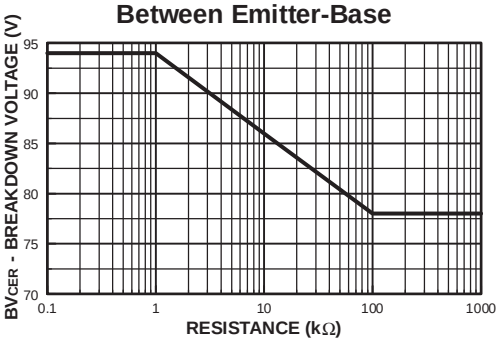
Base Emitter ON Voltage vs Collector Current



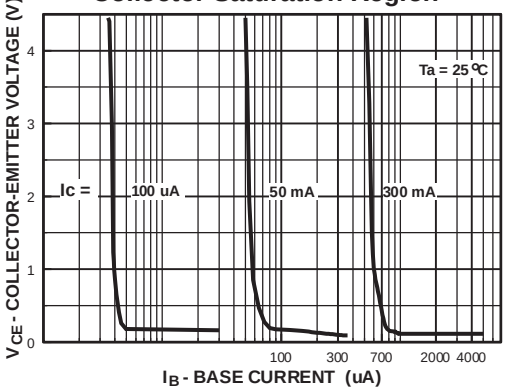
Collector-Cutoff Current vs Ambient Temperature



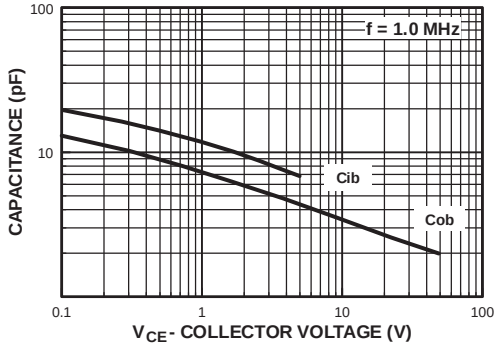
Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base



Collector Saturation Region

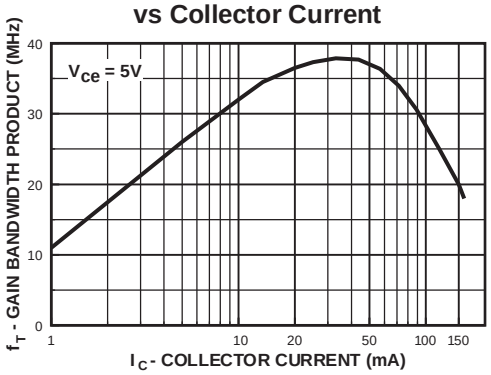


Input and Output Capacitance vs Reverse Voltage

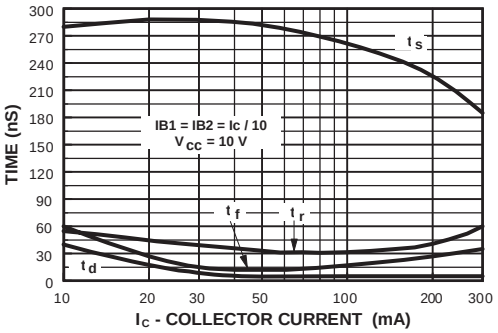


RATING CHARACTERISTIC CURVES (CH857SPT)

Gain Bandwidth Product vs Collector Current



Switching Times vs Collector Current



Power Dissipation vs Ambient Temperature