



**CHENMKO ENTERPRISE CO.,LTD**

**CHRT5993WPT**

**SURFACE MOUNT  
NPN Silicon RF Transistor**

VOLTAGE 11 Volts CURRENT 50 mAmpere

Lead free devices

**APPLICATION**

- \* UHF Converter
- \* Local Oscillator

**FEATURE**

- \* Small surface mounting type. (SOT-323/SC-70)
- \* High Transition frequency.

**CONSTRUCTION**

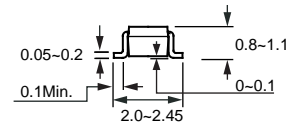
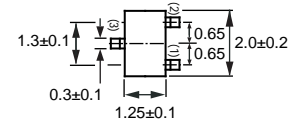
- \* NPN RF Transistor

**MARKING**

- \* R01



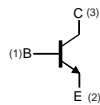
SC-70/SOT-323



Dimensions in millimeters

SC-70/SOT-323

**CIRCUIT**



**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CBO</sub>	collector-base voltage	open emitter	-	20	V
V <sub>CEO</sub>	collector-emitter voltage	open base	-	11	V
V <sub>EBO</sub>	emitter-base voltage	open collector	-	3	V
I <sub>C</sub>	collector current (DC)		-	50	mA
P <sub>C</sub>	Collector power dissipation		-	0.2	W
T <sub>stg</sub>	storage temperature		-50	+150	°C
T <sub>j</sub>	junction temperature		-	150	°C

**Note**

2007-05

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

## RATING CHARACTERISTIC CURVES ( CHRT5993WPT )

### CHARACTERISTICS

T<sub>amb</sub> = 25 °C unless otherwise specified.

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	20	-	-	V	IC= 10uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	11	-	-	V	IC= 1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	3	-	-	V	IE= 10uA, IC= 0A
Collector cut-off current	ICBO	-	-	0.5	uA	VCB= 10V, IE= 0A
Emitter cut-off current	IEBO	-	-	0.5	uA	VEB= 2V, IE= 0A
DC current gain	hFE	56	-	180	-	VCE= 10V, IC= 5mA
Collector-emitter saturation voltage	VCE(sat)	-	-	0.5	V	IC= 10mA, IB= 5mA
Transition frequency	f T	1400	3200	-	MHz	VCE= 10V, IE= -10mA
Collector output capacitance	Cob	-	0.8	1.5	pF	VCB= 10V, f = 1MHz, IE= 0A

## RATING CHARACTERISTIC CURVES ( CHRT5993WPT )

Figure 1. Collector-Emitter Saturation Voltage vs Collector Current

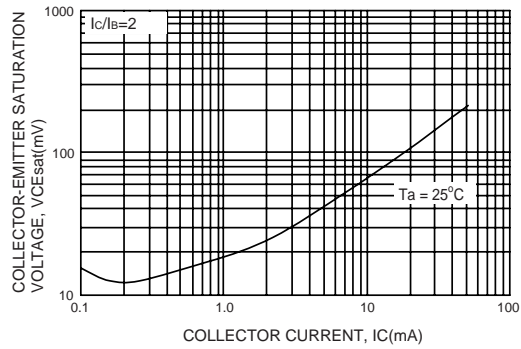


Figure 2. Collector-Base Voltage vs Collector Output Capacitance

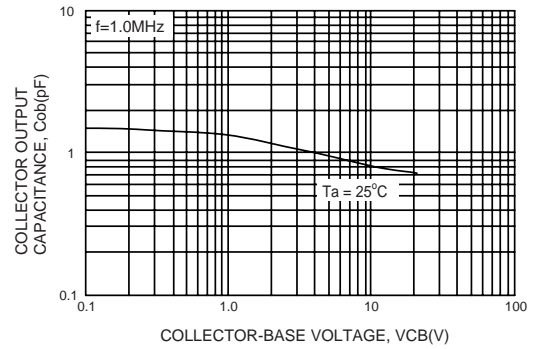


Figure 3. DC Current Gain

