



**CHENMKO ENTERPRISE CO.,LTD**

**CHUMG4PT**

**SURFACE MOUNT**

**Dual Digital Silicon Transistor**

VOLTAGE 50 Volts CURRENT 100 mAmpere

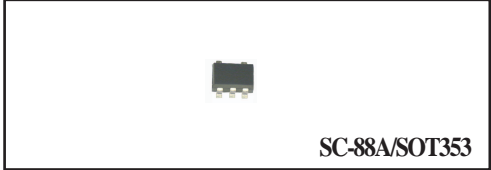
Lead free devices

**APPLICATION**

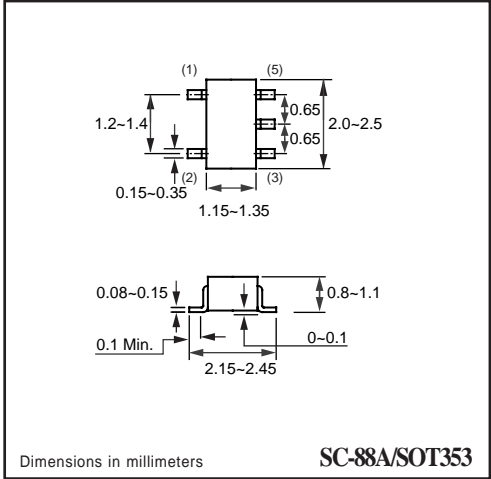
\* Switching circuit, Inverter, Interface circuit, Driver circuit.

**FEATURE**

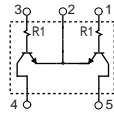
- \* Small surface mounting type. (SC-88A/SOT-353)
- \* High current gain.
- \* Suitable for high packing density.
- \* Low collector-emitter saturation.
- \* High saturation current capability.
- \* Both the CHDTC114T in one package.
- \* Built in bias resistor(R1=10kΩ, Typ. )



SC-88A/SOT353



**CIRCUIT**



**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base voltage		50	V
V <sub>CEO</sub>	Collector-Emitter voltage		50	V
V <sub>EBO</sub>	Emitter-Base voltage		5	V
I <sub>C(Max.)</sub>	Collector current		100	mA
P <sub>D</sub>	Power dissipation	T <sub>amb</sub> ≤ 25 °C, Note 1	200	mW
T <sub>STG</sub>	Storage temperature		-55 +150	°C
T <sub>J</sub>	Junction temperature		-55 +150	°C
Rθ <sub>J-S</sub>	Thermal resistance , Note 1	junction - soldering point	625	°C/W

**Note**

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

## RATING CHARACTERISTIC ( CHUMG4PT)

### CHARACTERISTICS

$T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
BVCBO	Collector-base breakdown voltage	$I_C=50\mu\text{A}$	50	–	–	V
BVCEO	Collector-emitter breakdown voltage	$I_C=1.0\text{mA}$	50	–	–	V
BVEBO	Emitter-base breakdown voltage	$I_E=50\mu\text{A}$	5.0	–	–	V
ICBO	Collector cutoff current	$V_{CB}=50\text{V}$	–	–	0.5	$\mu\text{A}$
IEBO	Emitter cutoff current	$V_{EB}=4\text{V}$	–	–	0.5	$\mu\text{A}$
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C/I_B=1\text{mA}/0.1\text{mA}$	–	–	0.3	V
$h_{FE}$	DC current gain	$I_C=1\text{mA}; V_{CE}=5.0\text{V}$	100	250	600	
$R_1$	Input resistor		7.0	10.0	13.0	$\text{K}\Omega$
$f_T$	Transition frequency	$I_E=-5\text{mA}, V_{CE}=10.0\text{V}$ $f=100\text{MHz}$	–	250	–	MHz

### Note

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

## RATING CHARACTERISTIC CURVES ( CHUMG4PT)

### Typical Electrical Characteristics

Fig.1 Input voltage vs. output current (ON characteristics)

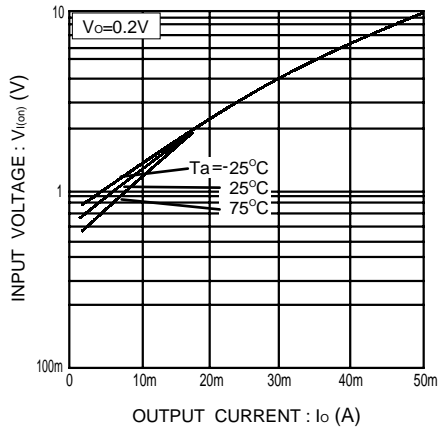


Fig.2 Output current vs. input voltage (OFF characteristics)

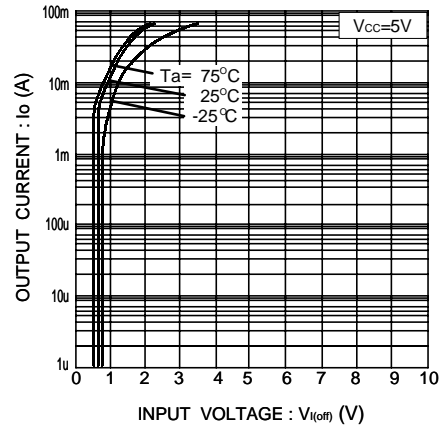


Fig.3 DC current gain vs. output current

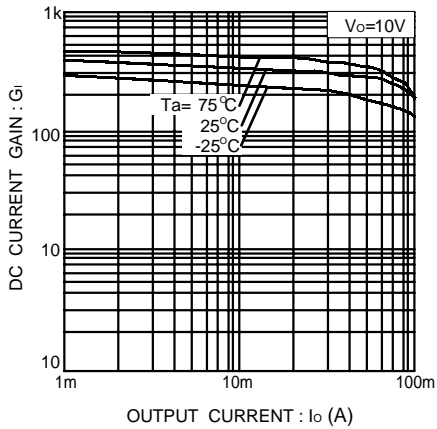


Fig.4 Output voltage vs. output current

