



**CHENMKO ENTERPRISE CO.,LTD**

*Halogens free devices*

**SURFACE MOUNT  
Dual Digital Silicon Transistor**

VOLTAGE 50 Volts CURRENT 100 mAmpere

**CHEMA4GP**

**APPLICATION**

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

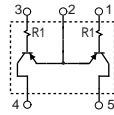
**FEATURE**

- \* Small surface mounting type. (SOT-553)
- \* High current gain.
- \* Suitable for high packing density.
- \* Low collector-emitter saturation.
- \* High saturation current capability.
- \* Two CHDTA114T chips in a package.
- \* Built in bias resistor(R1=10kΩ, Typ. )

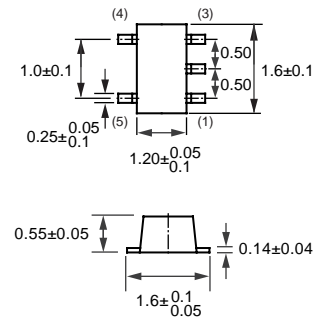
**MARKING**

\* A4

**CIRCUIT**



**SOT553**



Dimensions in millimeters

**SOT553**

**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</sub>	Collector current		-100	mA
P <sub>c</sub>	Collector Power dissipation	T <sub>amb</sub> ≤ 25 °C, Note 1	150	mW
T <sub>STG</sub>	Storage temperature		-55 +150	°C
T <sub>J</sub>	Junction temperature		150	°C

**Note**

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

2004-07

## RATING CHARACTERISTIC ( CHEMA4GP )

### CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
BVCBO	Collector-Base breakdown voltage	$I_C = -50\mu\text{A}$	-50.0	–	–	V
BVCEO	Collector-Emitter breakdown voltage	$I_C = -1\text{mA}$	-50.0	–	–	V
BVEBO	Emitter-Base breakdown voltage	$I_E = -50\mu\text{A}$	-5.0	–	–	V
VCE(sat)	Collector-Emitter Saturation voltage	$I_C = -10\text{mA}; I_B = -1\text{mA}$	–	–	-0.3	V
ICBO	Collector-Base current	$V_{CB} = -50\text{V}$	–	–	-0.5	$\mu\text{A}$
IEBO	Emitter-Base current	$V_{EB} = -4\text{V}$	–	–	-0.5	$\mu\text{A}$
hFE	DC current gain	$I_C = -1\text{mA}; V_{CE} = -5.0\text{V}$	100	250	600	
R1	Input resistor		7	10	13	$\text{K}\Omega$
$f_T$	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 ( CHEMA4GP )

### Typical Electrical Characteristics

Fig.1 DC current gain vs. collector current

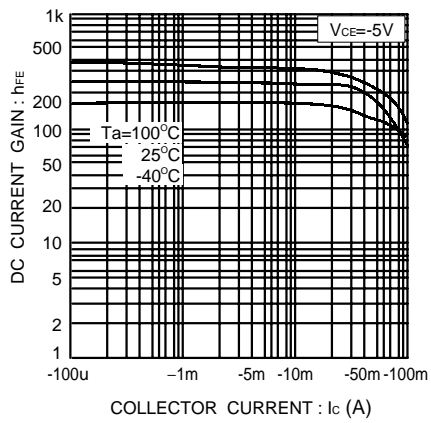


Fig.2 Collector-emitter saturation voltage vs. collector current

