



**CHENMKO ENTERPRISE CO.,LTD**

**SURFACE MOUNT  
Dual Digital Transistor**

VOLTAGE 50 Volts CURRENT 500 mAmpere

**CHIMD14PT**

*Lead free devices*

**APPLICATION**

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

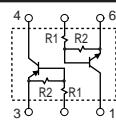
**FEATURE**

- \* Small surface mounting type. (SC-74/SOT-457)
- \* High current gain.
- \* Suitable for high packing density.
- \* Low collector-emitter saturation.
- \* High saturation current capability.
- \* Two 500mA digital transistor chips in one package.
- \* Built in bias resistor( $R_1=220\Omega$ , Typ. )

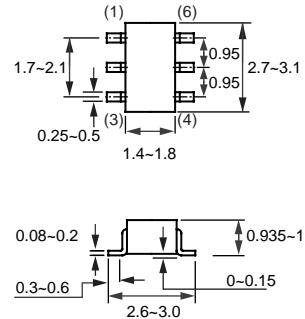
**MARKING**

\*ID14

**CIRCUIT**



**SC-74/SOT-457**



Dimensions in millimeters

**SC-74/SOT-457**

**PNP DIGITAL TRANSISTOR LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CC</sub>	Supply voltage		-	-50	V
V <sub>IN</sub>	Input voltage		-5	+5	V
I <sub>O</sub>	DC Output current		-	-500	mA
I <sub>C(MAX.)</sub>			-	-500	
P <sub>TOT</sub>	Total power dissipation	T <sub>amb</sub> ≤ 25 °C, Note 1	-	150	mW
T <sub>STG</sub>	Storage temperature		-55	+150	°C

**Note**

Transistor mounted on an FR4 printed-circuit board.

### NPN DIGITAL TRANSISTOR LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Vcc	Supply voltage		–	50	V
VIN	Input voltage		-5	+5	V
Io	DC Output current		–	500	mA
Ic(Max.)			–	500	
Ptot	Total power dissipation	Tamb ≤ 25 °C, Note 1	–	150	mW
Tstg	Storage temperature		-55	+150	°C

#### Note

Transistor mounted on an FR4 printed-circuit board.

### PNP DIGITAL TRANSISTOR CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V <sub>loff</sub>	Input off voltage	Io=-100mA; Vcc=-5.0V	-0.3	–	–	V
V <sub>i(on)</sub>	Input on voltage	Io=-50mA; Vo=-0.3V	–	–	-1.1	V
V <sub>o(on)</sub>	Output voltage	Io=-100mA; Ii=5mA	–	–	-0.3	V
I <sub>i</sub>	Input current	Vi=-3.0V	–	–	-17	mA
I <sub>c(off)</sub>	Output current	Vi=0V; Vcc=-50V	–	–	-0.5	uA
h <sub>FE</sub>	DC current gain	Io=-5.0mA; Vo=-100V	82	–	–	
R <sub>1</sub>	Input resistor		154	220	286	Ω
R <sub>2/R<sub>1</sub></sub>	Resistor ratio		36.3	45.5	54.6	

### NPN DIGITAL TRANSISTOR CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V <sub>loff</sub>	Input off voltage	Io=100mA; Vcc=5.0V	0.3	–	–	V
V <sub>i(on)</sub>	Input on voltage	Io=50mA; Vo=0.3V	–	–	1.1	V
V <sub>o(on)</sub>	Output voltage	Io=100mA; Ii=5mA	–	–	0.3	V
I <sub>i</sub>	Input current	Vi=3.0V	–	–	17	mA
I <sub>c(off)</sub>	Output current	Vi=0V; Vcc=50V	–	–	0.5	mA
h <sub>FE</sub>	DC current gain	Io=5mA; Vo=100V	82	–	–	
R <sub>1</sub>	Input resistor		154	220	286	Ω
R <sub>2/R<sub>1</sub></sub>	Resistor ratio		36.3	45.5	54.6	