



**CHENMKO ENTERPRISE CO.,LTD**

*Lead free devices*

**SURFACE MOUNT  
PNP Digital Silicon Transistor**

VOLTAGE 50 Volts CURRENT 100 mAmpere

**CHDTA143TKPT**

**APPLICATION**

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

**FEATURE**

- \* Small surface mounting type. (SC-59/SOT-346)
- \* High current gain.
- \* Suitable for high packing density.
- \* Low collector-emitter saturation.
- \* High saturation current capability.
- \* Internal isolated PNP transistors in one package.
- \* Built in bias resistor( $R_1=4.7\text{k}\Omega$ , Typ.)

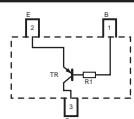
**CONSTRUCTION**

- \* One PNP transistors and bias of thin-film resistors in one package.

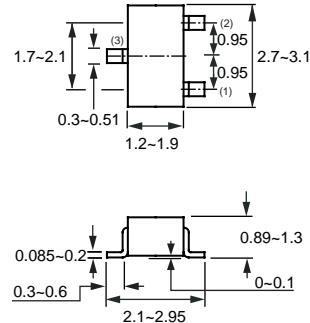
**MARKING**

TK2

**CIRCUIT**



**SC-59/SOT-346**



Dimensions in millimeters

**SC-59/SOT-346**

**LIMITING VALUES**

In accordance with the Absolute Maximum Rating System (IEC60134).

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-Base voltage		-50	V
$V_{CEO}$	Collector-Emitter voltage		-50	V
$V_{EBO}$	Emitter-Base voltage		-5	V
$I_C(\text{Max.})$	Collector current		-100	mA
$P_D$	Power dissipation	$T_{\text{amb}} \leq 25^\circ\text{C}$ , Note 1	200	mW
$T_{\text{STG}}$	Storage temperature		-55 +150	°C
$T_J$	Junction temperature		-55 +150	°C
$R_{\theta J-S}$	Thermal resistance , Note 1	junction - soldering point	140	°C/W

**Note**

- Transistor mounted on an FR4 printed-circuit board.

## RATING CHARACTERISTIC ( CHDTA143TKPT )

### CHARACTERISTICS

$T_{amb} = 25^{\circ}\text{C}$  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	$I_C = -5\text{mA}; I_B = -0.25\text{mA}$	-	-	-0.3	V
$I_{CBO}$	Collector-Base current	$V_{CB} = -50\text{V}$	-	-	-0.5	$\mu\text{A}$
$I_{EBO}$	Emitter-Base current	$V_{EB} = -4\text{V}$	-	-	-0.5	$\mu\text{A}$
$h_{FE}$	DC current gain	$I_C = -1\text{mA}; V_{CE} = -5.0\text{V}$	100	250	600	
$R_1$	Input resistor		3.29	4.7	6.11	$\text{k}\Omega$
$f_T$	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 ( CHDTA143TKPT )

### Typical Electrical Characteristics

Fig.1 DC current gain vs. collector current

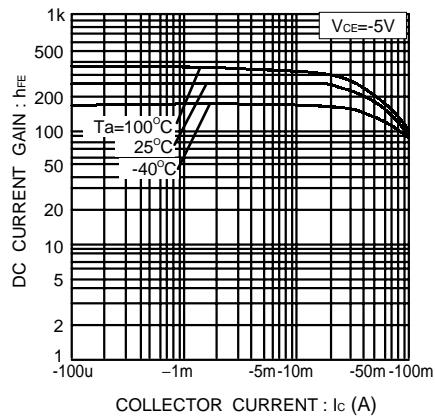


Fig.2 Collector-emitter saturation voltage vs. collector current

