



**CHENMKO ENTERPRISE CO.,LTD**

Lead free devices

**SURFACE MOUNT  
PNP Digital Silicon Transistor**

VOLTAGE 50 Volts CURRENT 30 mAmpere

CHDTA144VKPT

**APPLICATION**

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

**FEATURE**

- \* Small surface mounting type. (SC-59/SOT346)
- \* 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(R1=47kΩ, Typ. )

**CONSTRUCTION**

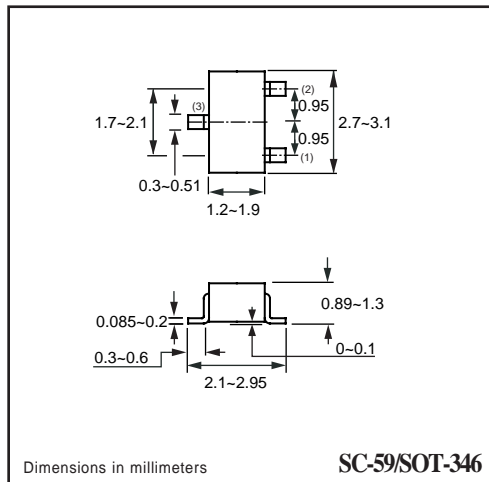
\* One PNP transistors and bias of thin-film resistors in one package.

**MARKING**

VK1



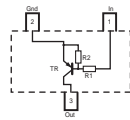
SC-59/SOT-346



Dimensions in millimeters

SC-59/SOT-346

**CIRCUIT**



**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		-40	+15	V
I <sub>O</sub>	DC Output current		-	-30	mA
I <sub>C(Max.)</sub>			-	-100	
P <sub>TOT</sub>	Total 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		-	150	°C
R <sub>θJ-S</sub>	Thermal resistance	junction - soldering point	-	140	°C/W

**Note**

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

## RATING CHARACTERISTIC ( CHDTA144VKPT )

### CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$V_{I(off)}$	Input off voltage	$I_o = -100\mu\text{A}; V_{CC} = -5.0\text{V}$	-1.0	-	-	V
$V_{I(on)}$	Input on voltage	$I_o = -2\text{mA}; V_o = -0.3\text{V}$	-	-	-6.0	V
$V_{O(on)}$	Output voltage	$I_o = -10\text{mA}; I_i = -0.5\text{mA}$	-	-0.1	-0.3	V
$I_i$	Input current	$V_i = -5\text{V}$	-	-	-0.16	mA
$I_{C(off)}$	Output current	$V_i = 0\text{V}; V_{CC} = -50\text{V}$	-	-	-0.5	$\mu\text{A}$
$h_{FE}$	DC current gain	$I_o = -5\text{mA}; V_o = -5.0\text{V}$	33	-	-	
$R_1$	Input resistor		32.9	47	61.1	$\text{K}\Omega$
$R_2/R_1$	Resistor ratio		0.17	0.21	0.26	
$f_T$	Transition frequency	$I_E = 5\text{mA}, V_{CE} = -10.0\text{V}$ $f = 100\text{MHz}$	-	250	-	MHz

### Note

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