



CHENMKO ENTERPRISE CO.,LTD

CHDTC115GKPT

**SURFACE MOUNT
NPN 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-59/SOT-346)
- * High current gain.
- * Suitable for high packing density.
- * Low collector-emitter saturation.
- * High saturation current capability.
- * Internal isolated NPN transistors in one package.
- * Built in bias resistor(R1=100kΩ, Typ.)

CONSTRUCTION

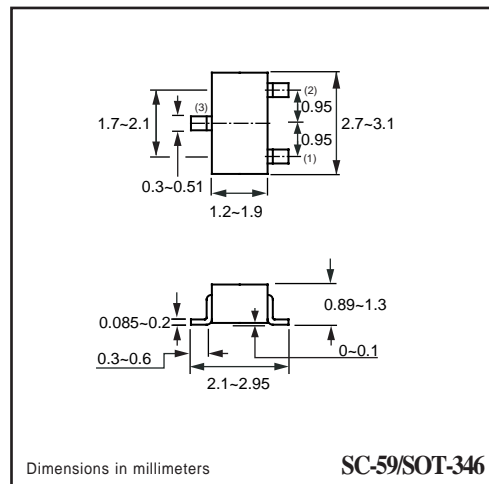
* One NPN transistors and bias of thin-film resistors in one package.

MARKING

GKD



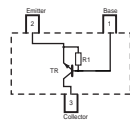
SC-59/SOT-346



Dimensions in millimeters

SC-59/SOT-346

CIRCUIT



LIMITING VALUES

In accordance with the Absolute Maximum Rating System.

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
Vcbo	Collector-Base voltage		50	V
VCEO	Collector-Emitter voltage		50	V
VEBO	Emitter-Base voltage		5	V
Ic	Collector current		100	mA
Pc	Collector Power dissipation	T _{amb} ≤ 25 °C, Note 1	200	mW
TSTG	Storage temperature		150	°C
TJ	Junction temperature		-55 +150	°C
RθJ-s	Thermal resistance , Note 1	junction - soldering point	140	°C/W

Note

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

RATING CHARACTERISTIC (CHDTC115GKPT)

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	$I_E = 72\mu\text{A}$	5.0	–	–	V
VCE(sat)	Collector-Emitter Saturation voltage	$I_C = 5\text{mA}; I_B = 0.25\text{mA}$	–	–	0.3	V
ICBO	Collector-Base current	$V_{CB} = 50\text{V}$	–	–	0.5	μA
IEBO	Emitter-Base current	$V_{EB} = 4\text{V}$	–	–	58	μA
hFE	DC current gain	$I_C = 5\text{mA}; V_{CE} = 5.0\text{V}$	82	–	–	
R ₁	Input resistor		70	100	130	K Ω
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: $t_p \leq 300\mu\text{s}; \delta \leq 0.02$.