



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

**SURFACE MOUNT
NPN Digital Silicon Transistor**

VOLTAGE 50 Volts CURRENT 100 mAmpere

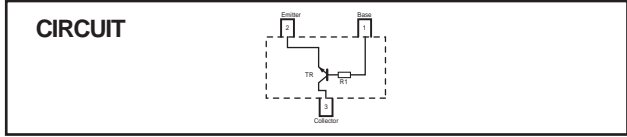
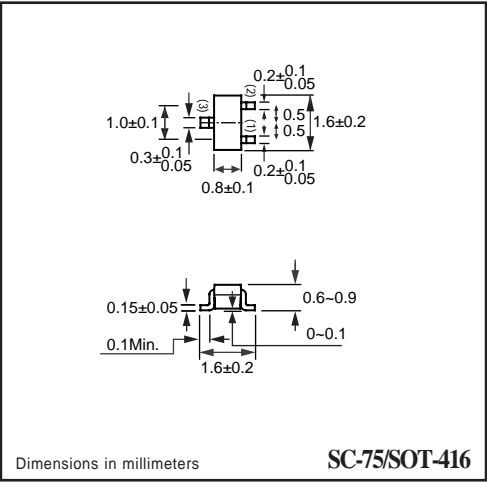
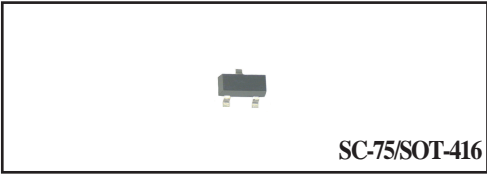
CHDTC144TEPT

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

FEATURE
* Small surface mounting type. (SC-75/SOT-416)
* 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 single resistor(R1=47kΩ, Typ.)

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

MARKING
TED



LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
Vcbo	Collector-Base voltage		50	V
Vceo	Collector-Emitter voltage		50	V
Vebo	Emitter-Base voltage		5	V
Ic(Max.)	Collector current		100	mA
Pd	Power dissipation	T _{amb} ≤ 25 °C, Note 1	150	mW
Tstg	Storage temperature		-55 +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 (CHDTC144TEPT)

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
BV _{CB0}	Collector-base breakdown voltage	I _C =50 μ A	50	–	–	V
BV _{CEO}	Collector-emitter breakdown voltage	I _C =1.0mA	50	–	–	V
BV _{EB0}	Emitter-base breakdown voltage	I _E =50 μ A	5.0	–	–	V
I _{CB0}	Collector cutoff current	V _{CB} =50V	–	–	0.5	μ A
I _{EB0}	Emitter cutoff current	V _{EB} =4V	–	–	0.5	μ A
V _{CE(sat)}	Collector-emitter saturation voltage	I _C /I _B =5mA/0.5mA	–	–	0.3	V
h _{FE}	DC current gain	I _C =1mA; V _{CE} =5.0V	100	250	600	
R ₁	Input resistor		32.9	47	61.1	K Ω
f _T	Transition frequency	I _C =5mA, V _{CE} =10.0V f=100MHz	–	250	–	MHz

Note

1. Pulse test: t_p≤300 μ s; δ ≤0.02.

RATING CHARACTERISTIC CURVES (CHDTC144TEPT)

Typical Electrical Characteristics

Fig.1 DC current gain vs. collector current

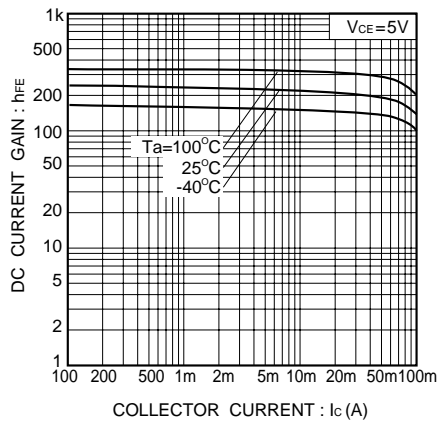


Fig.2 Collector-emitter voltage vs. collector current

