



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

**SURFACE MOUNT
NPN Digital Silicon Transistor**

VOLTAGE 50 Volts CURRENT 30 mAmpere

CHDTC144VUGP

APPLICATION

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

FEATURE

- * Small surface mounting type. (SC-70/SOT323)
- * 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=47k Ω , Typ.)

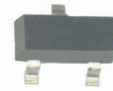
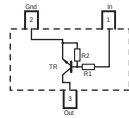
CONSTRUCTION

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

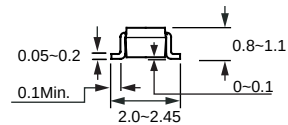
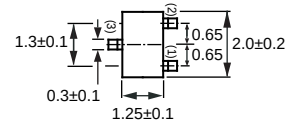
MARKING

VUA

CIRCUIT



SC-70/SOT-323



Dimensions in millimeters

SC-70/SOT-323

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CC}	Supply voltage		—	50	V
V _{IN}	Input voltage		-15	+40	V
I _O	DC Output current		—	30	mA
I _{C(Max.)}			—	100	
P _{TOT}	Total power dissipation	T _{amb} ≤ 25 °C, Note 1	—	200	mW
T _{STG}	Storage temperature		-55	+150	°C
T _J	Junction temperature		—	150	°C
R θ J-S	Thermal resistance	junction - soldering point	—	140	°C/W

Note

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

RATING CHARACTERISTIC (CHDTC144VUGP)

CHARACTERISTICS

T_{amb} = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V _{I(off)}	Input off voltage	I _o =100uA; V _{cc} =5.0V	1.0	–	–	V
V _{I(on)}	Input on voltage	I _o =2mA; V _o =0.3V	–	–	6.0	V
V _{O(on)}	Output voltage	I _o =10mA; I _i =0.5mA	–	0.1	0.3	V
I _i	Input current	V _i =5V	–	–	0.16	mA
I _{C(off)}	Output current	V _i =0V; V _{cc} =50V	–	–	0.5	uA
h _{FE}	DC current gain	I _o =5mA; V _o =5.0V	33	–	–	
R ₁	Input resistor		32.9	47	61.1	KΩ
R ₂ /R ₁	Resistor ratio		0.17	0.21	0.26	
f _T	Transition frequency	I _E =-5mA, V _{CE} =10.0V f=100MHz	–	250	–	MHz

Note

1.Pulse test: t_p≤300uS; δ≤0.02.