



CHENMKO ENTERPRISE CO.,LTD

CHIMD1PT

SURFACE MOUNT

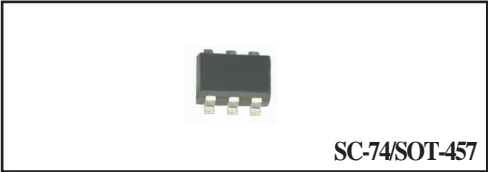
Dual Digital Silicon Transistor

VOLTAGE 50 Volts CURRENT 100 mAmpere

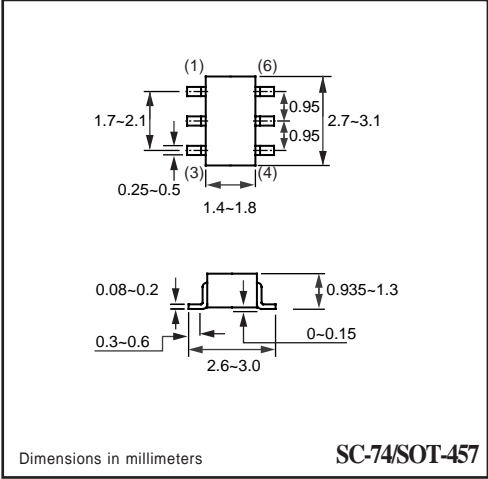
Lead free devices

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

FEATURE
 * Small surface mounting type. (SC-74/SOT-457)
 * High current gain.
 * Suitable for high packing density.
 * Low collector-emitter saturation.
 * High saturation current capability.
 * Both the CHDTA124T & CHDTC124T in one package.
 * Built in bias resistor(R1=22kΩ, Typ.)

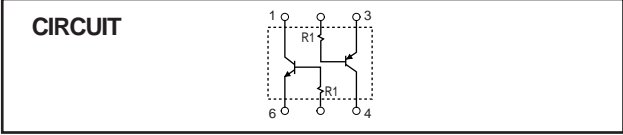


SC-74/SOT-457



Dimensions in millimeters

SC-74/SOT-457



CHDTA124T 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	300	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.

CHDTC124T LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CB0}	Collector-Base voltage		50	V
V _{CE0}	Collector-Emitter voltage		50	V
V _{EB0}	Emitter-Base voltage		5	V
I _{C(Max.)}	Collector current		100	mA
P _D	Power dissipation	T _{amb} ≤ 25 °C, Note 1	150	mW
T _{STG}	Storage temperature		-55 +150	°C
T _J	Junction temperature		-55 +150	°C
R _{θJ-S}	Thermal resistance , Note 1	junction - soldering point	140	°C/W

Note

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

CHDTA124T CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
BV _{CB0}	Collector-Base breakdown voltage	I _C = -50uA	-50.0	–	–	V
BV _{CE0}	Collector-Emitter breakdown voltage	I _C = -1mA	-50.0	–	–	V
BV _{EB0}	Emitter-Base breakdown voltage	I _E = -50uA	-5.0	–	–	V
V _{CE(sat)}	Collector-Emitter Saturation voltage	I _C = -5mA; I _B = -0.5mA	–	–	-0.3	V
I _{CB0}	Collector-Base current	V _{CB} = -50V	–	–	-0.5	uA
I _{EB0}	Emitter-Base current	V _{EB} = -4V	–	–	-0.5	uA
h _{FE}	DC current gain	I _C = -1mA; V _{CE} = -5.0V	100	250	600	
R ₁	Input resistor		15.4	22	26.6	KΩ
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.

CHDTC124T CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
BV _{CB0}	Collector-base breakdown voltage	I _C = 50uA	50	–	–	V
BV _{CE0}	Collector-emitter breakdown voltage	I _C = 1.0mA	50	–	–	V
BV _{EB0}	Emitter-base breakdown voltage	I _E = 50uA	5.0	–	–	V
I _{CB0}	Collector cutoff current	V _{CB} = 50V	–	–	0.5	uA
I _{EB0}	Emitter cutoff current	V _{EB} = 4V	–	–	0.5	uA
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		15.4	22	28.6	KΩ
f _T	Transition frequency	I _C = 5mA, V _{CE} = 10.0V f = 100MHz	–	250	–	MHz

Note

1. Pulse test: t_p ≤ 300uS; δ ≤ 0.02.

RATING CHARACTERISTIC CURVES (CHIMD1PT)

CHDTA124T Typical Electrical Characteristics

Fig.1 DC current gain vs. collector current

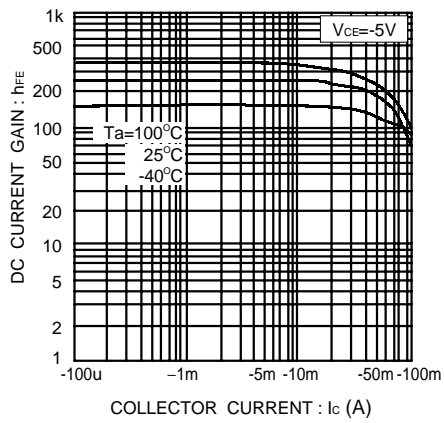
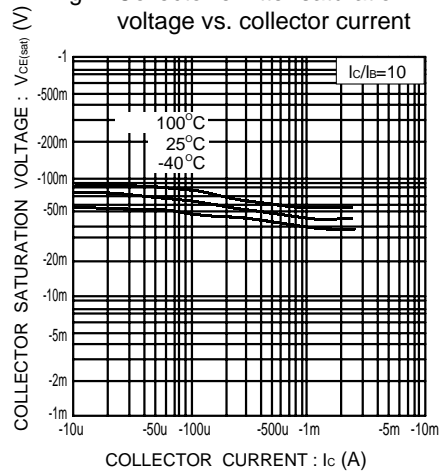


Fig.2 Collector-emitter saturation voltage vs. collector current



RATING CHARACTERISTIC CURVES (CHIMD1PT)

CHDTC124T Typical Electrical Characteristics

Fig.1 DC current gain vs. collector current

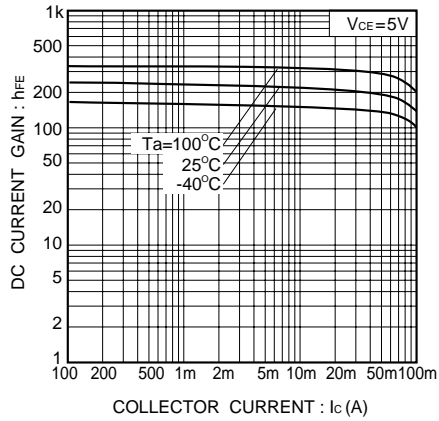


Fig.2 Collector-emitter voltage vs. collector current

