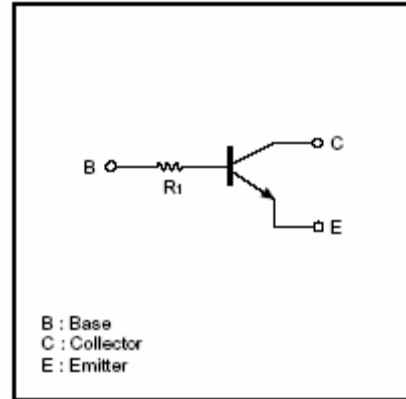


FEATURES

- * Built-in bias resistors enable the configuration of an inverter circuit without connecting input resistors
- * Only the on/off conditions need to be set for operation, making device design easy.
- * The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.

●Equivalent circuit



PIN CONNECTIONS AND MARKING

DTC114TE

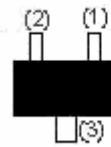


- (1) Base
- (2) Emitter
- (3) Collector

SOT-523

Abbreviated symbol: 04

DTC114TUA

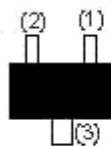


- (1) Base
- (2) Emitter
- (3) Collector

SOT-323

Abbreviated symbol: 04

DTC114TKA



- (1) Base
- (2) Emitter
- (3) Collector

SOT-23-3L

Abbreviated symbol: 04

DTC114TCA

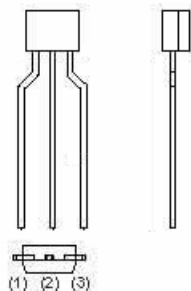


- (1) Base
- (2) Emitter
- (3) Collector

SOT-23

Abbreviated symbol: 04

DTC114TSA



- (1) Emitter
- (2) Collector
- (3) Base

TO-92S

MAXIMUM RATINGS* $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	LIMITS(DTC114T□)					Units
		E	UA	KA	CA	SA	
V_{CBO}	Collector-Base Voltage	50					V
V_{CEO}	Collector-Emitter Voltage	50					V
V_{EBO}	Emitter-Base Voltage	5					V
I_C	Collector Current -Continuous	100					mA
P_C	Collector Dissipation	150	200			300	mW
T_j	Junction temperature	150					$^\circ\text{C}$
T_J, T_{stg}	Junction and Storage Temperature	-55~+150					$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.5	μA
DC current gain	h_{FE}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	100	300	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.3	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_E=-5\text{mA}, f=100\text{MHz}$		250		MHz
Input resistor	R1		7	10	13	$\text{k}\Omega$

Typical Characteristics

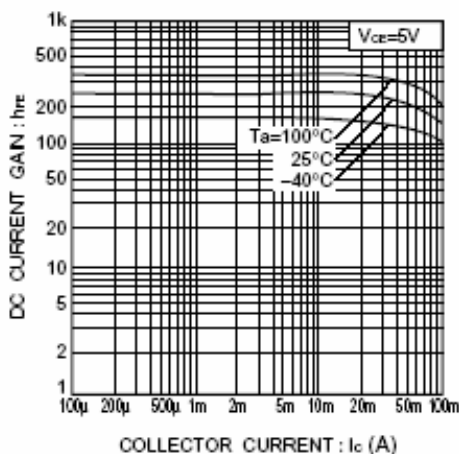


Fig.1 DC current gain vs. collector current

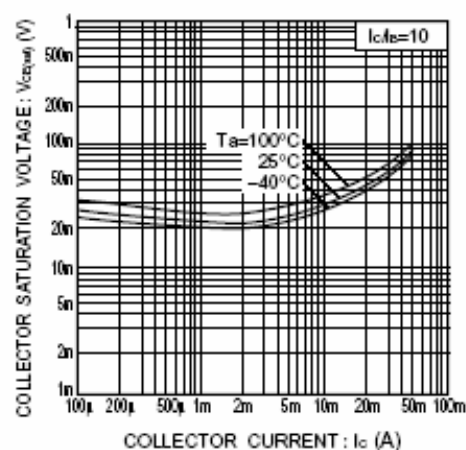


Fig.2 Collector-emitter saturation voltage vs. collector current