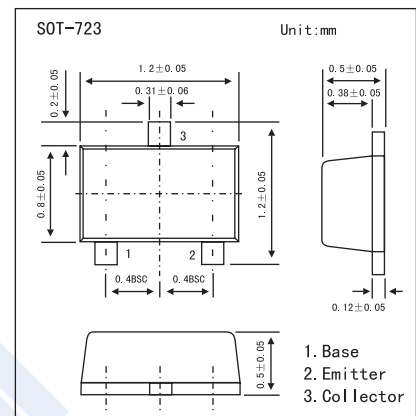


Digital Transistors

DTA114TM

■ Features

- PNP Epitaxial Planar Silicon Transistor (Resistor Built-In Typ.)
- Built-In Bias Resistors Enable The Configuration of An Inverter Circuit Without Connecting External Input Resistors
(See Equivalent Circuit).

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	-50	V
Collector-Emitter Voltage	V_{CE0}	-50	V
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-100	mA
Collector Power Dissipation	P_C	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = -50 \mu\text{A}$	-50			V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = -1\text{mA}$	-50			V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E = -50 \mu\text{A}$	-5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -50\text{V}$			-0.5	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -4\text{V}$			-0.5	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}$, $I_B = -1\text{mA}$			-0.3	V
DC Current Transfer Ratio	h_{FE}	$V_{CE} = -5\text{V}$, $I_C = -1\text{mA}$	100	250	600	
Input Resistance	R_1		7	10	13	$k\Omega$
Transistion Frequency	f_T *	$V_{CE} = -10\text{V}$, $I_E = 5\text{mA}$, $f = 100\text{MHz}$		250		MHz

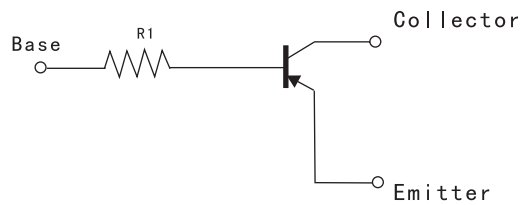
* Characteristics of built-in transistor

■ Marking

Marking	94
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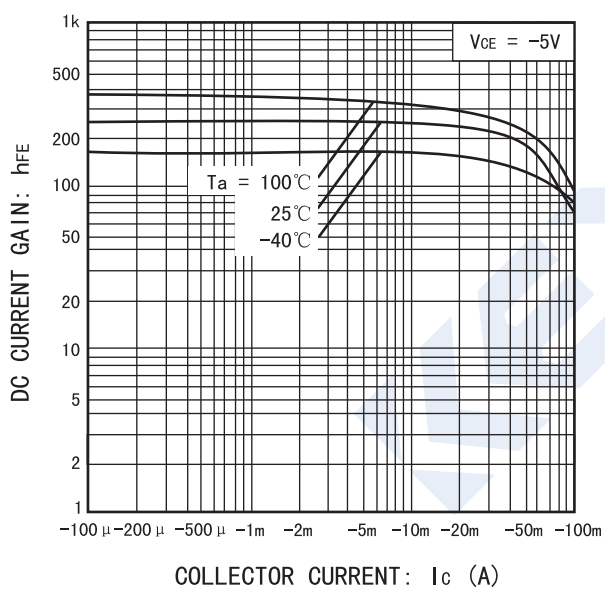
DTA114TM

■ Equivalent Circuit

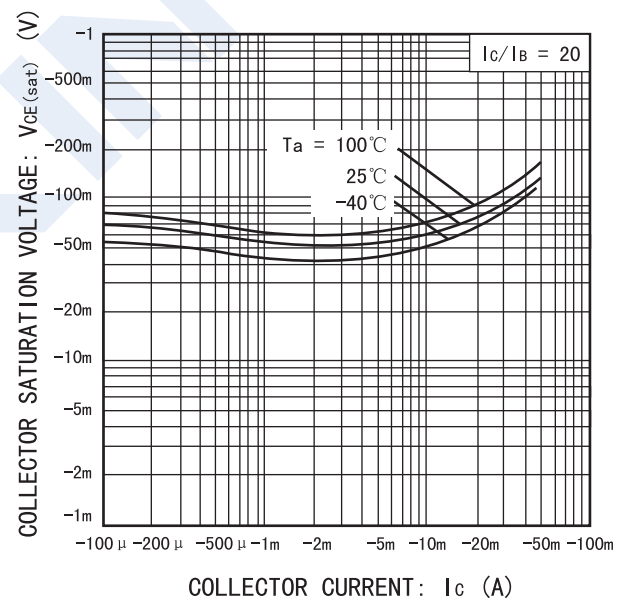


$$R_1 = 10\text{k}\Omega$$

■ Electrical Characteristics Curves



DC current gain vs. collector current



Collector-emitter saturation voltage vs. collector current