

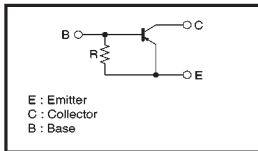
Digital transistors (built-in resistor)

DTB114GK

●Features

- 1) The built-in bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input, and parasitic effects are almost completely eliminated.
- 2) Only the on / off conditions need to be set for operation, making device design easy.
- 3) Higher mounting densities can be achieved.

●Circuit schematic



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	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	-500	mA
Collector power dissipation	P _C	200	mW
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55~+150	°C

●Package, marking, and packaging specifications

Part No.	DTB114GK
Package	SMT3
Marking	L14
Packaging code	T146
Basic ordering unit (pieces)	3000

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	-50	—	—	V	I _C =-50 μA
Collector-emitter breakdown voltage	BV _{CE0}	-50	—	—	V	I _C =-1mA
Emitter-base breakdown voltage	BV _{EB0}	-5	—	—	V	I _E =-720 μA
Collector cutoff current	I _{CB0}	—	—	-0.5	μA	V _{CE} =-30V
Emitter cutoff current	I _{EB0}	-300	—	-580	μA	V _{EB} =-4V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	-0.3	V	I _C /I _E =-50mA/-2.5mA
DC current transfer ratio	h _{FE}	56	—	—	—	I _C =-100mA, V _{CE} =-5V
Emitter-base resistance	R	7	10	13	kΩ	—
Transition frequency	f _r	—	200	—	MHz	V _{CE} =-10V, I _E =5mA, f=100MHz

* Transition frequency of the device.

(96-292-B114G)

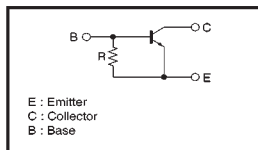
Digital transistors (built-in resistor)

DTD114GK

●Features

- 1) The built-in bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input, and parasitic effects are almost completely eliminated.
- 2) Only the on / off conditions need to be set for operation, making device design easy.
- 3) Higher mounting densities can be achieved.

●Circuit schematic



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	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	500	mA
Collector power dissipation	P _C	200	mW
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55~+150	°C

●Package, marking, and packaging specifications

Part No.	DTD114GK
Package	SMT3
Marking	L24
Packaging code	T146
Basic ordering unit (pieces)	3000

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	50	—	—	V	I _C =50 μA
Collector-emitter breakdown voltage	BV _{CE0}	50	—	—	V	I _C =1mA
Emitter-base breakdown voltage	BV _{EB0}	5	—	—	V	I _E =720 μA
Collector cutoff current	I _{CB0}	—	—	0.5	μA	V _{CE} =50V
Emitter cutoff current	I _{EB0}	300	—	580	μA	V _{EB} =4V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	0.3	V	I _C /I _E =50mA/2.5mA
DC current transfer ratio	h _{FE}	56	—	—	—	I _C =100mA, V _{CE} =5V
Emitter-base resistance	R	7	10	13	kΩ	—
Transition frequency	f _r	—	200	—	MHz	V _{CE} =10V, I _E =-50mA, f=100MHz

* Transition frequency of the device.

(96-360-D114G)