

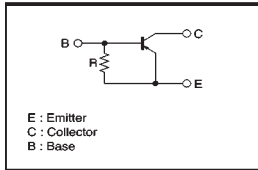
Digital transistors (built-in resistor)

DTA144GUA / DTA144GKA

●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



●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 =-160 μA
Collector cutoff current	I _{CB0}	—	—	-0.5	μA	V _{CB} =-50V
Emitter cutoff current	I _{EB0}	-65	—	-130	μA	V _{EB} =-4V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	-0.3	V	I _C =-10mA, I _E =-0.5mA
DC current transfer ratio	h _{FE}	68	—	—	—	I _C =-5mA, V _{CE} =-5V
Emitter-base resistance	R	32.9	47	61.1	kΩ	—
Transition frequency	f _T	—	250	—	MHz	V _{CE} =-10V, I _E =5mA, f=100MHz *

* Transition frequency of the device.

(94S-570-A144G)

●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	-100	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.	DTA144GUA	DTA144GKA
Package	UMT3	SMT3
Marking	K16	K16
Packaging code	T106	T146
Basic ordering unit (pieces)	3000	3000

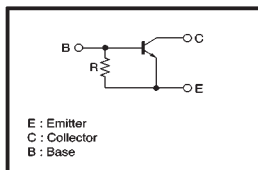
Digital transistors (built-in resistor)

DTC144GE / DTC144GUA / DTC144GKA / DTC144GSA

●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



●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 =160 μA
Collector cutoff current	I _{CB0}	—	—	0.5	μA	V _{CB} =50V
Emitter cutoff current	I _{EB0}	65	—	130	μA	V _{EB} =4V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	0.3	V	I _C =10mA, I _E =0.5mA
DC current transfer ratio	h _{FE}	68	—	—	—	I _C =5mA, V _{CE} =5V
Emitter-base resistance	R	32.9	47	61.1	kΩ	—
Transition frequency	f _T	—	250	—	MHz	V _{CE} =10V, I _E =5mA, f=100MHz *

* Transition frequency of the device.

●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	100	mA
Collector Power dissipation	DTC144GE	150	mW
	DTC144GUA / DTC144GKA	200	
	DTC144GSA	300	
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55~+150	°C

●Package, marking, and packaging specifications

Part No.	DTC144GE	DTC144GUA	DTC144GKA	DTC144GSA
Package	EMT3	UMT3	SMT3	SPT
Marking	K26	K26	K26	—
Packaging code	TL	T106	T146	TP
Basic ordering unit (pieces)	3000	3000	3000	5000

(94S-692-C144G)