

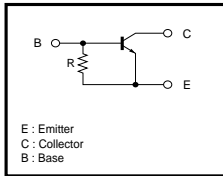
Digital transistors (built-in resistor)

DTA115GUA / DTA115GKA / DTA115GSA

●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.

●Equivalent circuit



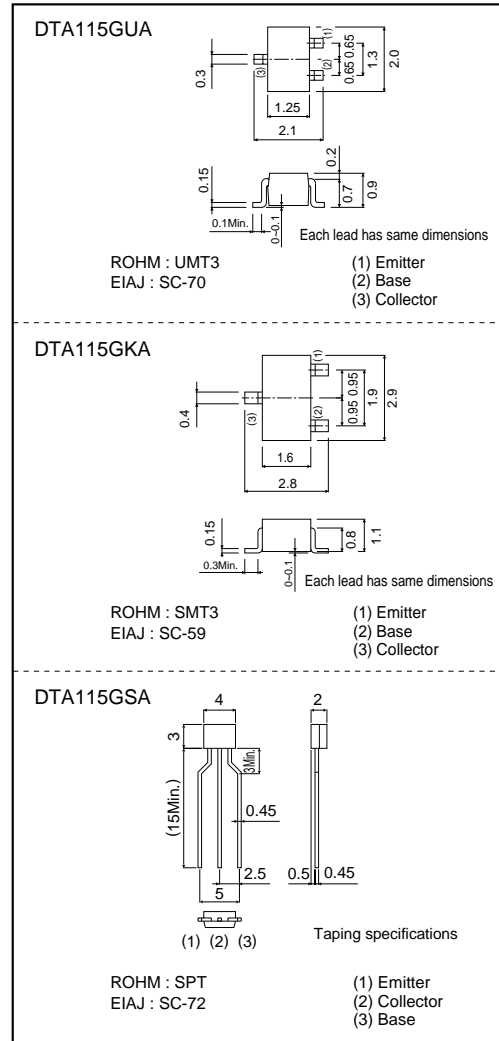
●Absolute maximum ratings (Ta=25°C)

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
		300	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55→+150	°C

●Package, marking, and packaging specifications

Type	DTA115GUA	DTA115GKA	DTA115GSA
Package	UMT3	SMT3	SPT
Marking	K19	K19	-
Packaging code	T106	T146	TP
Basic ordering unit (pieces)	3000	3000	5000

●External dimensions (Units : mm)



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	-50	-	-	V	I _c =-50μA
Collector-emitter breakdown voltage	BV _{CE0}	-50	-	-	V	I _c =-1mA
Emitter-base breakdown voltage	BV _{EB0}	-5	-	-	V	I _E =-72μA
Collector cutoff current	I _{cbo}	-	-	-0.5	μA	V _{CB} =-50V
Emitter cutoff current	I _{ebo}	-30	-	-58	μA	V _{EB} =-4V
Collector-emitter saturation voltage	V _{CE(sat)}	-	-	-0.3	V	I _c =-5mA, I _E =-0.25mA
DC current transfer ratio	h _{FE}	82	-	-	-	I _c =-5mA, V _{CE} =-5V
Emitter-base resistance	R	70	100	130	kΩ	-
Transition frequency	f _t	-	250	-	MHz	V _{CE} =-10V, I _E =5mA, f=100MHz

* Transition frequency of the device.