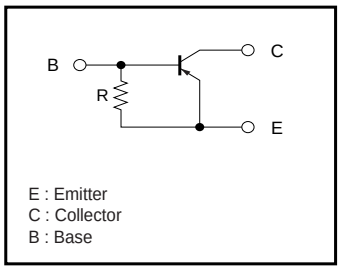
Digital transistors (built-in resistor)

DTA115GUA / DTA115GKA

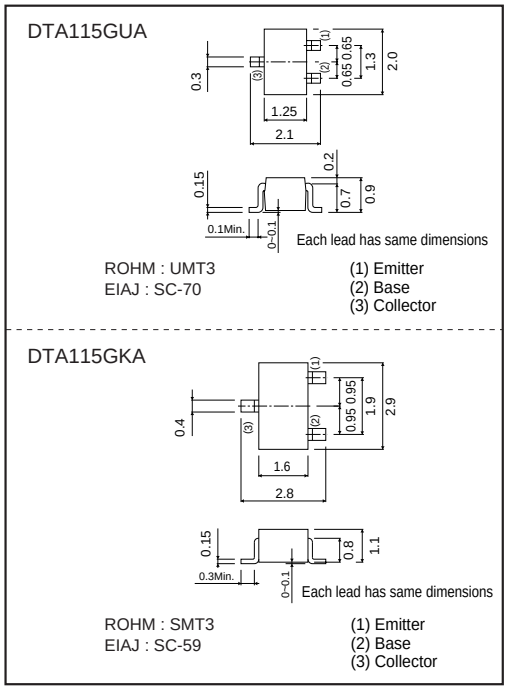
●Features

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



●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–50	V
Collector-emitter voltage	V_{CEO}	–50	V
Emitter-base voltage	V_{EBO}	–5	V
Collector current	I_C	–100	mA
Collector power dissipation	Pc	200	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

●Package, marking, and packaging specifications

Type	DTA115GUA	DTA115GKA
Package	UMT3	SMT3
Marking	K19	K19
Packaging code	T106	T146
Basic ordering unit (pieces)	3000	3000

●**Electrical characteristics** (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	–50	–	–	V	I_C= –50μA
Collector-emitter breakdown voltage	BV_{CEO}	–50	–	–	V	I_C= –1mA
Emitter-base breakdown voltage	BV_{EBO}	–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_B= –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.

●**Electrical characteristics curves**

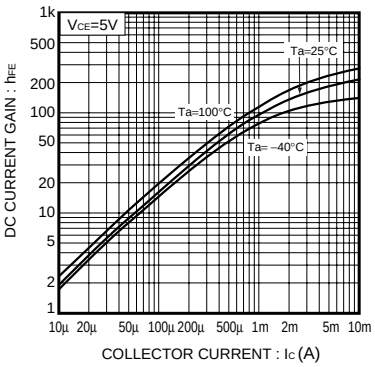


Fig.1 DC current gain vs. Collector current

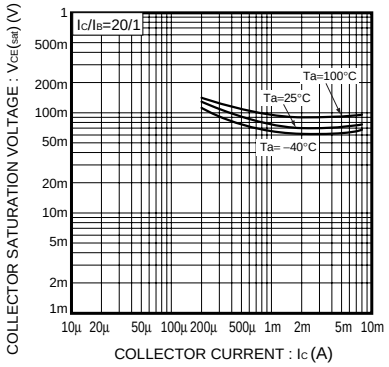


Fig.2 Collector-Emitter saturation voltage vs. Collector current

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