

Digital transistor (built-in resistor)

DTA125TUA / DTA125TKA / DTA125TSA

●Features

- 1) Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors.
- 2) The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input, and parasitic effects are almost completely eliminated.
- 3) Only the on / off conditions need to be set for operation, making device design easy.
- 4) Higher mounting densities can be achieved.

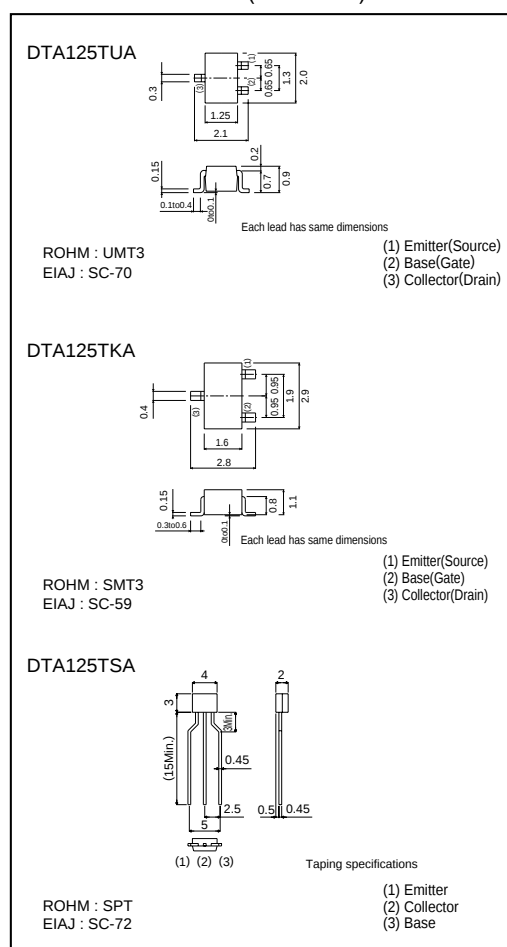
●Absolute maximum ratings (Ta = 25°C)

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	DTA125TUA / DTA125TKA DTA125TSA	200	mW
		300	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

●Package, marking, and packaging specifications

Part No.	DTA125TUA	DTA125TKA	DTA125TSA
Package	UMT3	SMT3	SPT
Marking	9A	9A	-
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_{CBO}	-50	-	-	V	$I_C = -50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	-50	-	-	V	$I_C = -1mA$
Emitter-base breakdown voltage	BV_{EBO}	-5	-	-	V	$I_E = -50\mu A$
Collector cutoff current	I_{CBO}	-	-	-0.5	μA	$V_{CB} = -50V$
Emitter cutoff current	I_{EBO}	-	-	-0.5	μA	$V_{EB} = -4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-0.3	V	$I_C = -0.5mA, I_E = -0.05mA$
DC current transfer ratio	h_{FE}	100	250	600	-	$I_C = -1mA, V_{CE} = -5V$
Input resistance	R_i	140	200	260	k Ω	-
Transition frequency	f_T	-	250	-	MHz	$V_{CE} = -10V, I_E = 5mA, f = 100MHz$ *

* Transition frequency of the device.

●Circuit schematic

