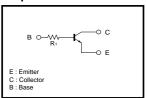
Digital transistors (built in resistor)

DTC115TM / DTC115TE / DTC115TUA / DTC115TKA / DTC115TSA

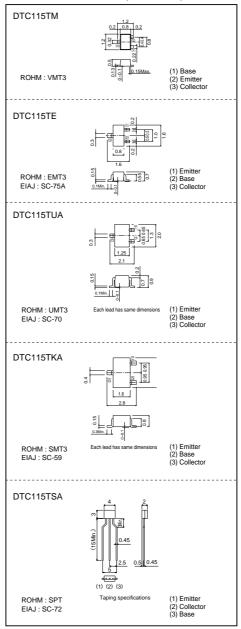
Features

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors.
- The bias resistors consist of thin-film resistors with complete isolation to allow negative 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.

Equivalent circuit



●External dimensions (Units : mm)



● Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		Vсво	50	V
Collector-emitter voltage		VCEO	50	V
Emitter-base voltage		VEBO	5	V
Collector current		Ic	100	mA
Collector power dissipation	DTC115TM / DTC115TE		150	mW
	DTC115TUA / DTC115TKA	Pc	200	
	DTC115TSA		300	
Junction temperature		Tj	150	°C
Storage temperature		Tstq	-55~+150	°C

● Packaging, marking, and packaging specifications

Part No.	DTC115TM	DTC115TE	DTC115TUA	DTC115TKA	DTC115TSA
Package	VMT3	EMT3	UMT3	SMT3	SPT
Marking	09	09	09	09	-
Packaging code	T2L	TL	T106	T146	TP
Basic ordering unit (pieces)	8000	3000	3000	3000	5000

● Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	50	-	-	V	Ic=50μA
Collector-emitter breakdown voltage	BVceo	50	-	-	V	Ic=1mA
Emitter-base breakdown voltage	ВVево	5	-	-	V	Iε=50μA
Collector cutoff current	Ісво	-	-	0.5	μΑ	Vcb=50V
Emitter cutoff current	ІЕВО	-	-	0.5	μΑ	V _{EB} =4V
Collector-emitter saturation voltage	VCE(sat)	-	-	0.3	V	Ic/Iв=1mA/0.1mA
DC current transfer ratio	hfe	100	250	600	-	Ic=1mA, VcE=5V
Input resistance	R ₁	70	100	130	kΩ	-
Transition frequency	f⊤	-	250	-	MHz	Vc=10V, I=-5mA, f=100MHz *

^{*} Transition frequency of the device

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