

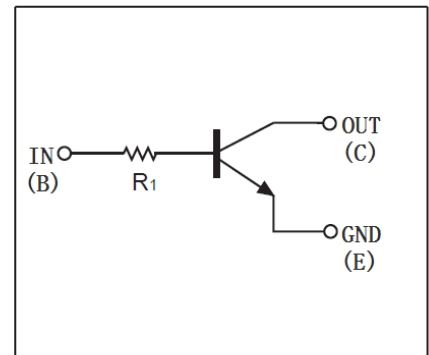
DTC143TM/DTC143TE/DTC143TUA DTC143TKA /DTC143TCA/DTC143TSA

DIGITAL TRANSISTOR (NPN)

FEATURES

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit)
- The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input.They also have the advantage of almost completely eliminating parasitic effects
- Only the on/off conditions need to be set for operation, making device design easy

• Equivalent Circuit



Part Number	MARKING ⁽¹⁾	Package	Packing Method	Pack Quantity
DTC143TM	03	SOT-723	Reel	8000pcs/Reel
DTC143TE	03	SOT-523	Reel	3000pcs/Reel
DTC143TUA	03	SOT-323	Reel	3000pcs/Reel
DTC143TKA	03	SOT-23-3L	Reel	3000pcs/Reel
DTC143TCA	03	SOT-23	Reel	3000pcs/Reel
DTC143TSA	C143 ⁽²⁾ T•XXX	TO-92S	Bulk	1000pcs/Bag
DTC143TSA-TA	C143 ⁽²⁾ T•XXX	TO-92S	Tape	3000pcs/Box

Notes: (1). Solid dot = Green molding compound device, if none, the normal device.

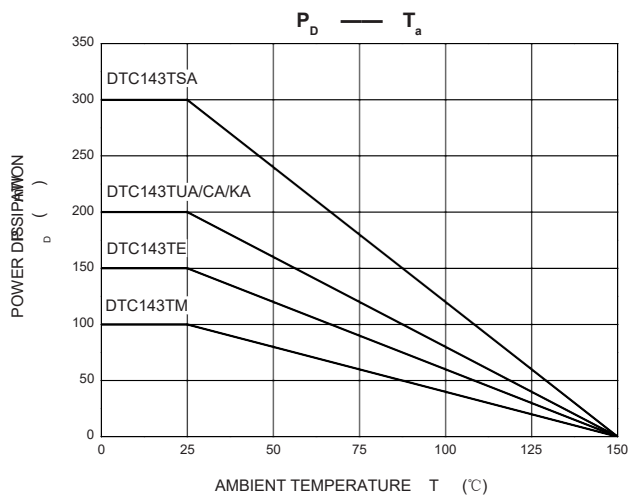
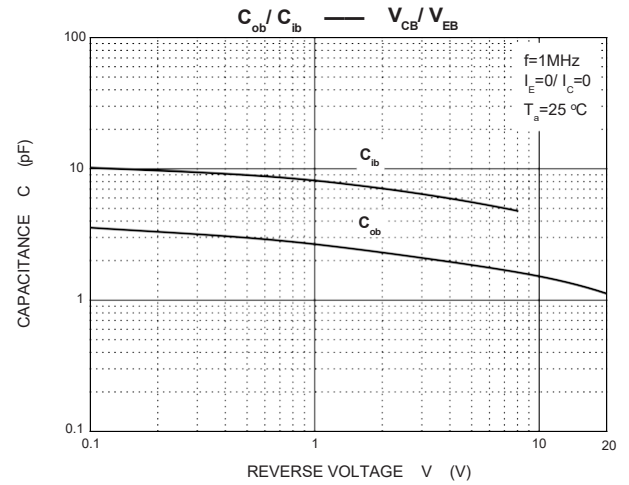
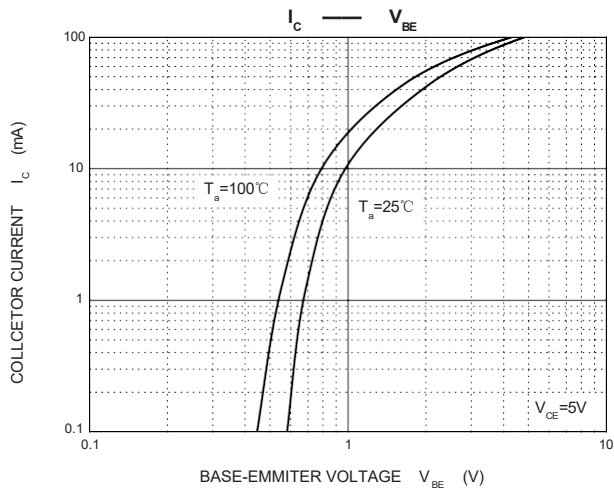
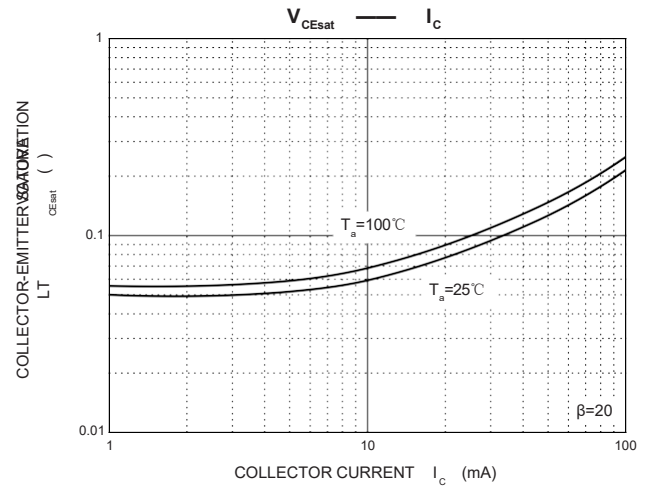
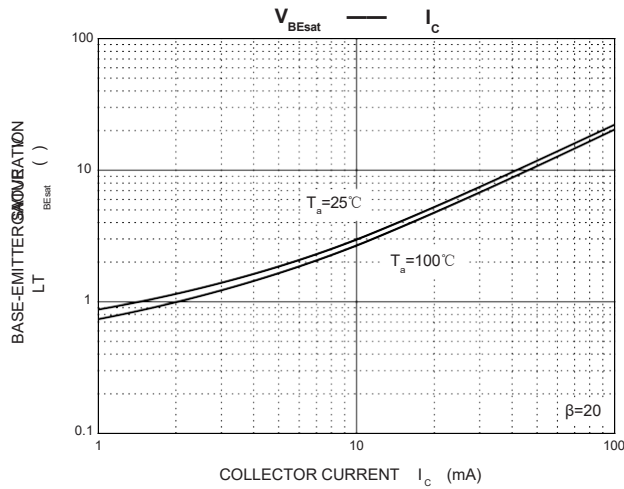
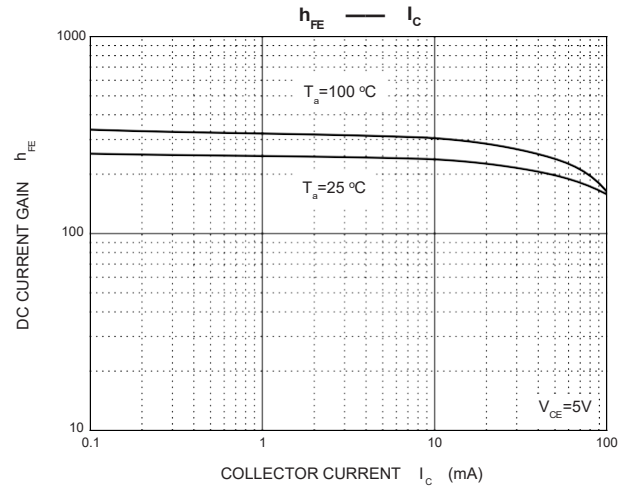
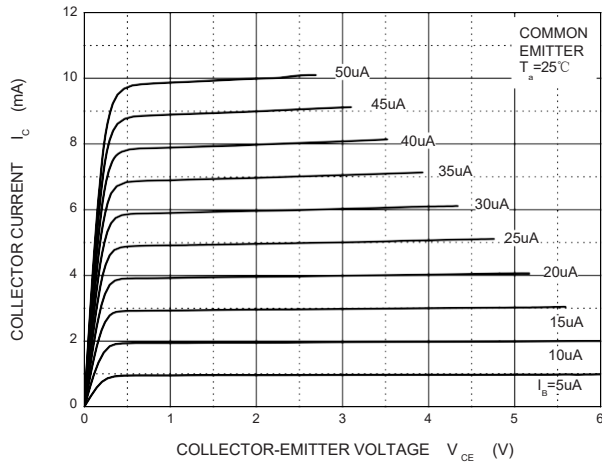
(2). XXX=Code

MAXIMUM RATINGS(Ta=25 °C unless otherwise noted)

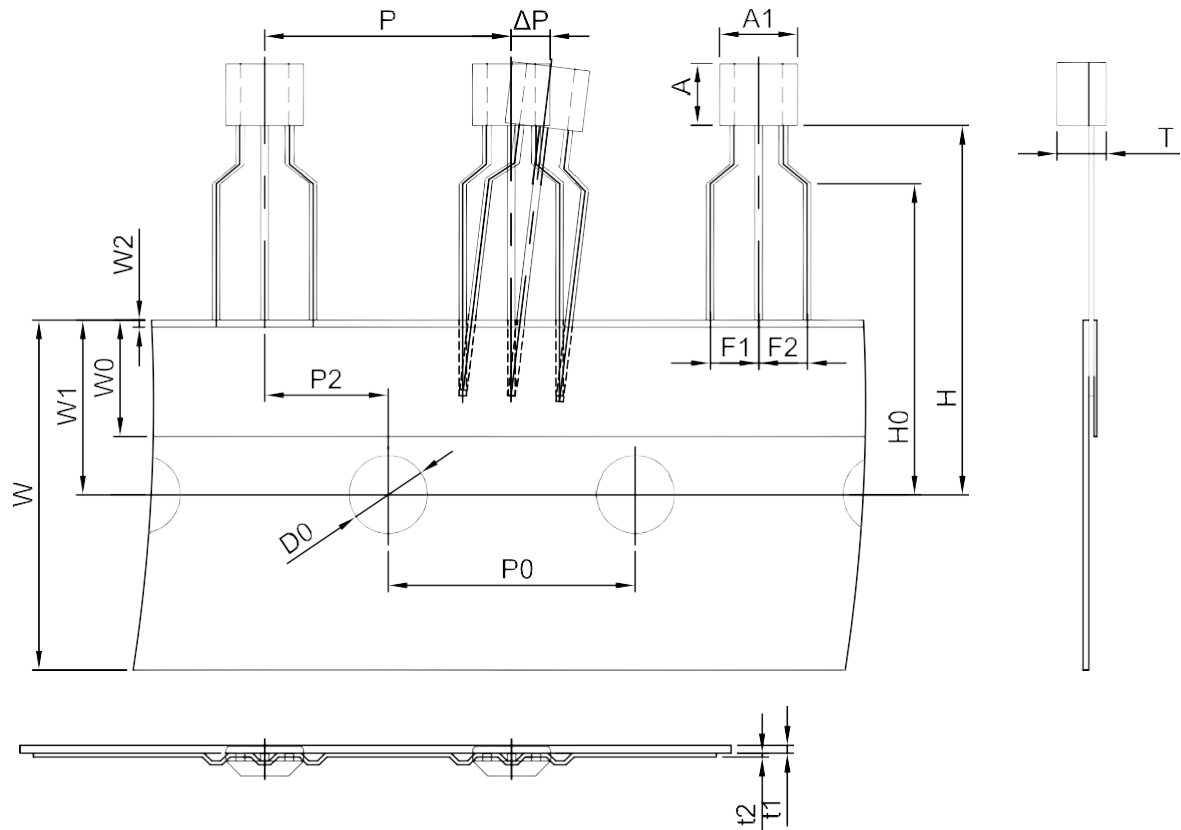
Symbol	Parameter	Limits(DTC143T□)						Unit
		M	E	UA	CA	KA	SA	
V _{CBO}	Collector-Base Voltage	50						V
V _{CEO}	Collector-Emitter Voltage	50						V
V _{EBO}	Emitter-Base Voltage	5						V
I _C	Collector Current	100						mA
P _D	Power Dissipation	100	150	200	200	200	300	mW
T _j	Junction Temperature	150						°C
T _{stg}	Storage Temperature	-55~+150						°C

ELECTRICAL CHARACTERISTICS (Ta=25 °C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =50μA, I _E =0	50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =50μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =50V, I _E =0			0.5	μA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0			0.5	μA
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =5mA, I _B =0.25mA			0.3	V
DC current gain	h _{FE}	V _{CE} =5V, I _C =1mA	100		600	
Input resistor	R _i		3.29	4.7	6.11	kΩ
Transition frequency	f _T	V _{CE} =10V, I _E =-5mA, f=100MHz		250		MHz

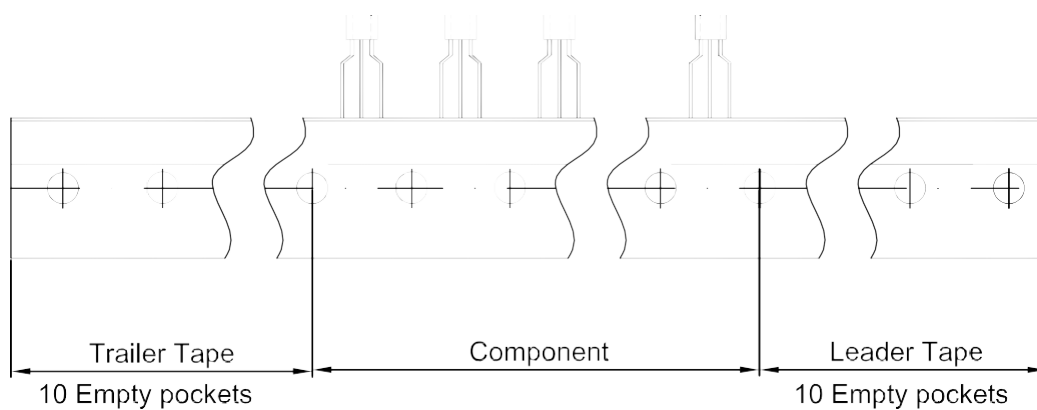
Static Characteristic


TO-92S PACKAGE TAPING DIMENSION



Dimiensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.0	3.15	1.52	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size (mm)	Carton	Carton Size (mm)
TO-92S	3,000 pcs	330×184×40	30,000 pcs	505×405×240