



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Digital transistors (built-in resistor)

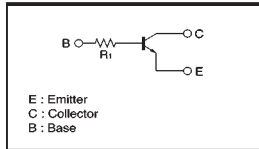
DTC323TU / DTC323TK / DTC323TS

●Features

In addition to the features of regular digital transistors,

- 1) Low $V_{CE(sat)}$ makes these transistors ideal for muting circuits.
(Typ. 0.04V at $I_C/I_B=50/2.5mA$)
- 2) They can be used at high current. ($I_{CMax.}=600mA$)

●Circuit schematic



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	30	—	—	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	15	—	—	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	$V_{CB}=20V$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB}=4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	40	80	mV	$I_C/I_B=50mA/2.5mA$
DC current transfer ratio	h_{FE}	100	250	600	—	$I_C=50mA, V_{CE}=5V$
Input resistance	R_1	1.64	2.2	2.86	k Ω	—
Transition frequency	f_r	—	200	—	MHz	$V_{CE}=10V, I_E=-50mA, f=100MHz$ *
Output on resistance	R_{on}	—	0.65	—	Ω	$V_I=7V, R_L=1k\Omega, f=1kHz$

* Transition frequency of the device.

(96-348-C323T)

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	15	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	600	mA
Collector power dissipation	DTC323TU / DTC323TK	200	mW
	DTC323TS	300	
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~+150	°C

●Package, marking, and packaging specifications

Part No.	DTC323TU	DTC323TK	DTC323TS
Package	UMT3	SMT3	SPT
Marking	H02	H02	—
Packaging code	T106	T146	TP
Basic ordering unit (pieces)	3000	3000	5000

Digital transistors (built-in resistor)

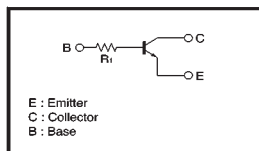
DTC343TK / DTC343TS

●Features

In addition to the features of regular digital transistors,

- 1) Low $V_{CE(sat)}$ makes these transistors ideal for muting circuits.
(Typ. 0.04V at $I_C/I_B=50/2.5mA$)
- 2) They can be used at high current. ($I_{CMax.}=600mA$)

●Circuit schematic



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	30	—	—	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	15	—	—	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	$V_{CB}=20V$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB}=4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	40	80	mV	$I_C=50mA, I_B=2.5mA$
DC current transfer ratio	h_{FE}	100	250	600	—	$I_C=50mA, V_{CE}=5V$
Input resistance	R_1	3.29	4.7	6.11	k Ω	—
Transition frequency	f_r	—	200	—	MHz	$V_{CE}=10V, I_E=-50mA, f=100MHz$ *
Output on resistance	R_{on}	—	0.95	—	Ω	$V_I=7V, R_L=1k\Omega, f=1kHz$

* Transition frequency of the device.

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	15	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	600	mA
Collector power dissipation	DTC343TK	200	mW
	DTC343TS	300	
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~+150	°C

●Package, marking, and packaging specifications

Part No.	DTC343TK	DTC343TS
Package	SMT3	SPT
Marking	H03	—
Packaging code	T146	TP
Basic ordering unit (pieces)	3000	5000

(94S-751-C343T)