

Transistors

General purpose (dual digital transistors)

IMH20

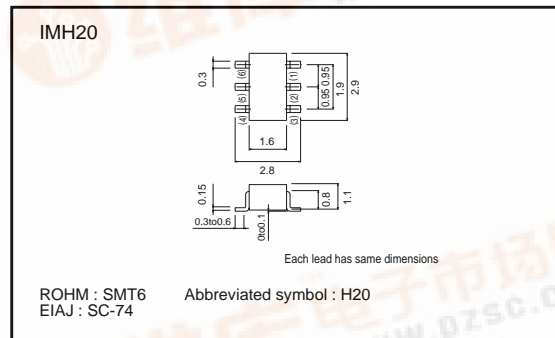
●Features

- 1) Two DTC323T chips in a SMT package.
- 2) Mounting possible with SMT3 automatic mounting machines.
- 3) Transistor elements are independent, eliminating interference.

●Structure

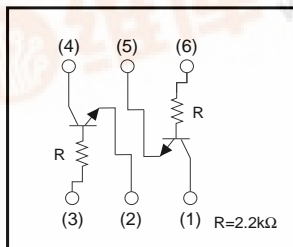
Epitaxial planar type
NPN silicon transistor

●External dimensions (Unit : mm)



The following characteristics apply to both DTr₁ and DTr₂.

●Equivalent circuit



●Packaging specifications

Type	Package	Taping
	Code	T110
	Basic ordering unit (pieces)	3000
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●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	30	V
Collector-emitter voltage	V _{CE0}	15	V
Emitter-base voltage	V _{EB0}	5	V
Collector current	I _c	600	mA
Collector power dissipation	P _c	300 (TOTAL)	mW *
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

* 200mW per element must not be exceeded.

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	30	-	-	V	I _c =50μA
Collector-emitter breakdown voltage	BV _{CE0}	15	-	-	V	I _c =1mA
Emitter-base breakdown voltage	BV _{EB0}	5	-	-	V	I _E =50μA
Collector cutoff current	I _{CB0}	-	-	0.5	μA	V _{CB} =20V
Emitter cutoff current	I _{EB0}	-	-	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	kΩ	-
Transition frequency	f _t	-	200	-	MHz	V _{CE} =10V, I _E =-50mA, f=100MHz *
Output on resistance	R _{on}	-	0.65	-	Ω	V _{CE} =7V, I _E =1kΩ, f=1KHz

* Transition frequency of the device

●Electrical characteristic curves

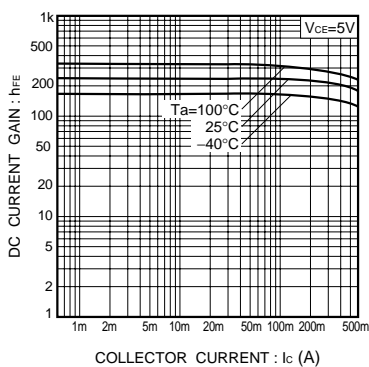


Fig.1 DC current gain vs. collector current

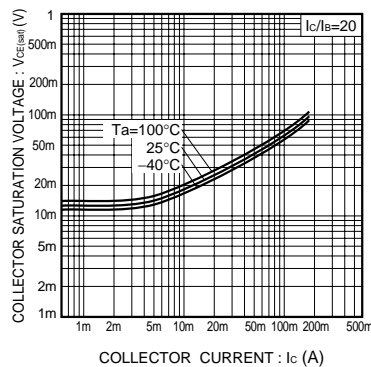


Fig.2 Collector-emitter saturation voltage vs. collector current

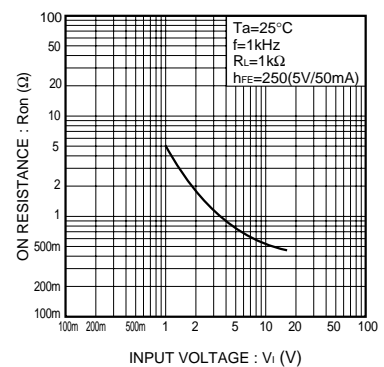


Fig.3 Output on resistance vs. input voltage

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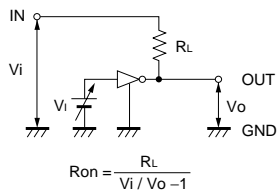


Fig.4 Output on resistance test circuit

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