

General purpose (dual digital transistors)

UMB3N / IMB3A

●Features

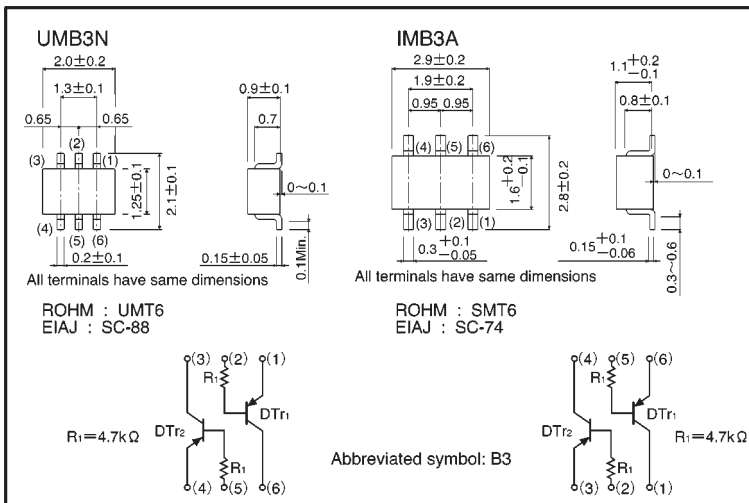
- 1) Two DTA143T chips in a UMT or SMT package.
- 2) Mounting possible with UMT3 or SMT3 automatic mounting machines.
- 3) Transistor elements are independent, eliminating interference.

●Structure

Dual PNP digital transistor
(each with single built in resistor)

The following characteristics apply to both DTr₁ and DTr₂.

●External dimensions (Units: mm)



●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	UMB3N	P _c	150 (TOTAL)	mW
	IMB3A		300 (TOTAL)	
Junction temperature		T _j	150	°C
Storage temperature		T _{stg}	−55 ~ +150	°C

*1 120mW per element must not be exceeded.

*2 200mW per element must not be exceeded.

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CBO}	−50	—	—	V	I _C = −50 μA
Collector-emitter breakdown voltage	BV _{CEO}	−50	—	—	V	I _C = −1mA
Emitter-base breakdown voltage	BV _{EBO}	−5	—	—	V	I _E = −50 μA
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 /I _B = −5mA/−2.5mA
DC current transfer ratio	h _{FE}	100	250	600	—	V _{CE} = −5V, I _C = −1mA
Transition frequency	f _T	—	250	—	MHz	V _{CE} = 10mA, I _E = −5mA, f = 100MHz*
Input resistance	R ₁	3.29	4.7	6.11	kΩ	—

* Transition frequency of the device

●Packaging specifications

Part No.	Packaging type	Taping	
	Code	TN	T110
	Basic ordering unit (pieces)	3000	3000
UMB3N			—
IMB3N		—	

●Electrical characteristic curves

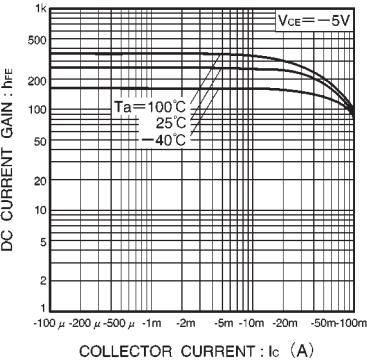


Fig.1 DC current gain vs. collector current

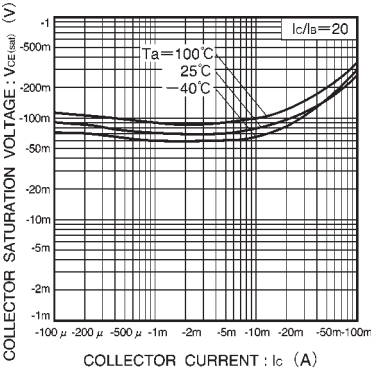


Fig.2 Collector-emitter saturation voltage vs. collector current