

General purpose (dual digital transistors)

EMD6 / UMD6N / IMD6A

●Features

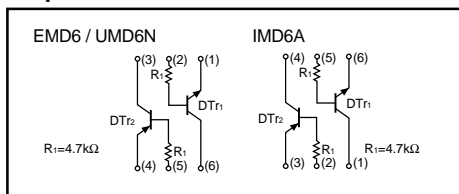
- 1) Both the DTA143T chip and DTC143T chip in an EMT or UMT or SMT package.
- 2) Mounting possible with EMT3 or UMT3 or SMT3 automatic mounting machines.
- 3) Transistor elements are independent, eliminating interference.
- 4) Mounting cost and area can be cut in half.

●Structure

A PNP and NPN digital transistor
(each with a single built in resistor)

The following characteristics apply to both the DT_{r1} and DT_{r2}, however, the “-” sign on DT_{r2} values for the PNP type have been omitted.

●Equivalent circuit

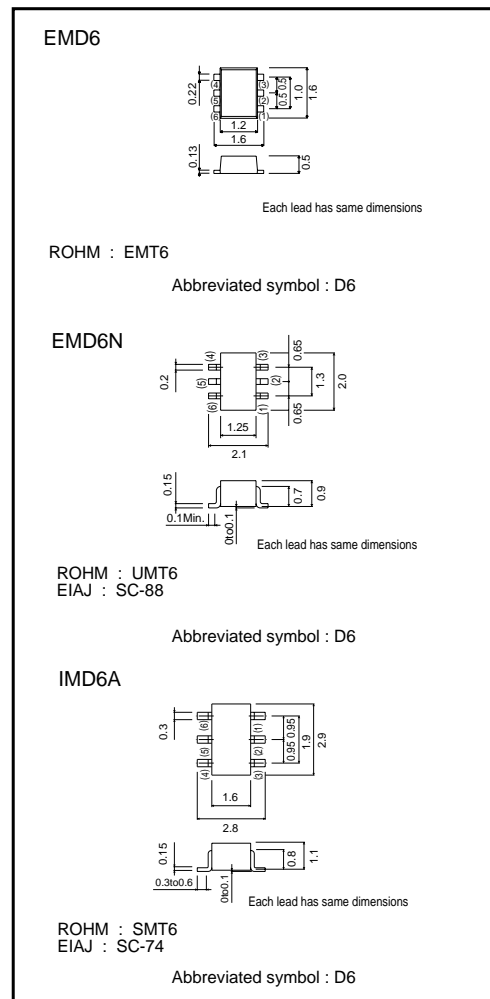


●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	50	V
Collector-emitter voltage	V _{CE0}	50	V
Emitter-base voltage	V _{EB0}	5	V
Collector current	I _c	100	mA
Collector power dissipation	EMD6, UMD6N	150 (TOTAL)	mW
	IMD6A	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.

●External dimensions (Units : mm)



Transistors

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	50	—	—	V	I _c =50μA
Collector-emitter breakdown voltage	BV _{CEO}	50	—	—	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} =50V
Emitter cutoff current	I _{EB0}	—	—	0.5	μA	V _{EB} =4V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	0.3	V	I _c /I _B =5mA/0.25mA
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 transistor

●Packaging specifications

Type	Package	Taping		
	Code	T2R	TR	T108
	Basic ordering unit (pieces)	8000	3000	3000
EMD6	○	—	—	—
UMD6N	—	○	—	—
IMD6A	—	—	—	○

●Electrical characteristic curves

DTr1 (NPN)

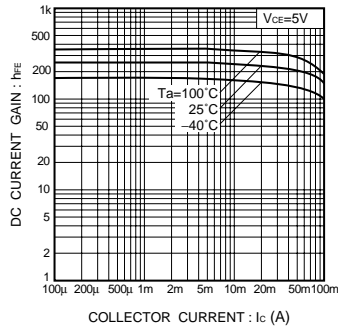


Fig.1 DC current gain vs. collector current

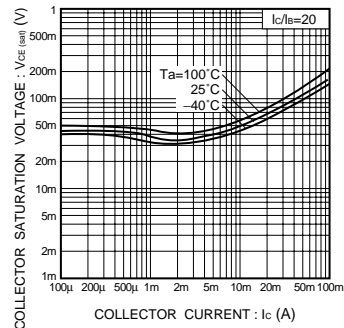


Fig.2 Collector-emitter saturation voltage vs. collector current

DTr2 (PNP)

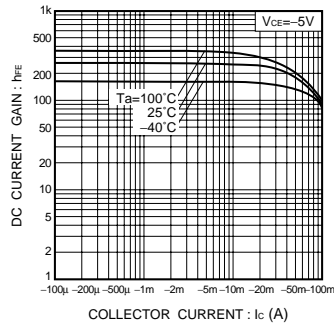


Fig.3 DC current gain vs. collector current

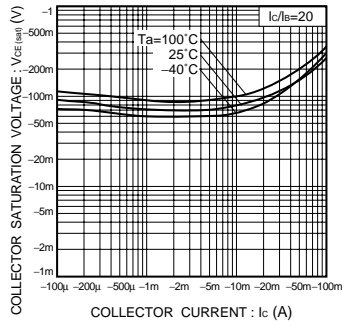


Fig.4 Collector-emitter saturation voltage vs. collector current



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.