

EMD3 / UMD3N / IMD3A

●Features

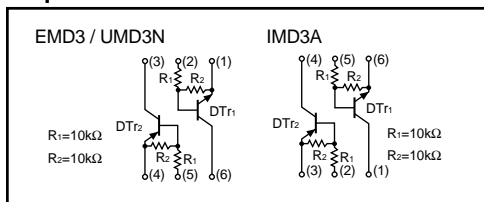
- 1) Both the DTA114E chip and DTC114E chip in a EMT or UMT or SMT package.
- 2) Mounting possible with EMT3 or UMT3 or SMT3 automatic mounting machines.
- 3) Transistor elements are independent, eliminating interference.
- 4) Mounting cost and area can be cut in half.

●Structure

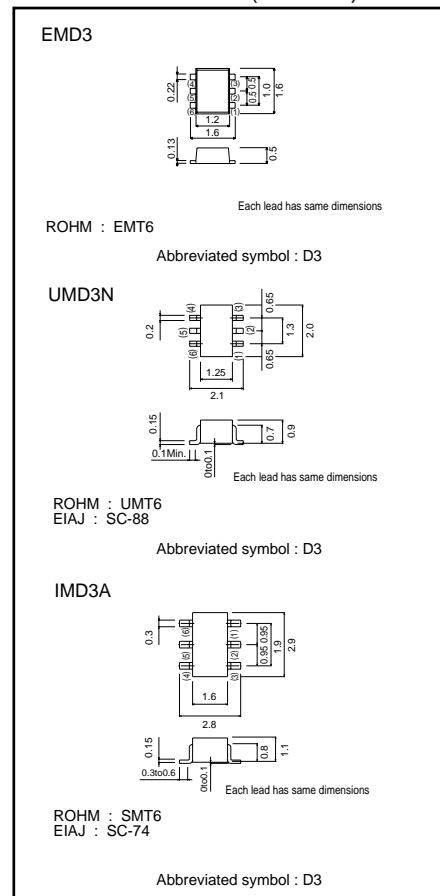
Epitaxial planar type
NPN / PNP TY transistor (Built-in resistor type)

The following characteristics apply to both the DTr1 and DTr2, however, the “-” sign on DTr2 values for the PNP type have been omitted.

●Equivalent circuits



●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	50	V
Input voltage	V _{IN}	-10	V
		40	
Output current	I _O	50	mA
	I _{C (Max.)}	100	
Power dissipation	EMD3, UMD3N	150 (TOTAL)	mW
	IMD3A	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.

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●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V _{I (off)}	–	–	0.5	V	V _{CC} =5V, I _O =100μA
	V _{I (on)}	3	–	–		V _O =0.3V, I _O =10mA
Output voltage	V _{O (on)}	–	0.1	0.3	V	I _O =10mA, I _I =0.5mA
Input current	I _I	–	–	0.88	mA	V _I =5V
Output current	I _{O (off)}	–	–	0.5	μA	V _{CC} =50V, V _I =0V
DC current gain	G _I	30	–	–	–	V _O =5V, I _O =5mA
Transition frequency	f _T	–	250	–	MHz	V _{CE} =10V, I _E =–5mA, f=100MHz *
Input resistance	R ₁	7	10	13	kΩ	–
Resistance ratio	R ₂ /R ₁	0.8	1	1.2	–	–

* Transition frequency of the device

●Packaging specifications

Type	Package	Taping		
	Code	T2R	TN	T110
	Basic ordering unit (pieces)	8000	3000	3000
EMD3	○	—	—	—
UMD3N	—	○	—	—
IMD3A	—	—	—	○