

EMC2 / UMC2N / FMC2A

●Features

- 1) Includes a DTA124E and DTC124E transistor in a EMT or UMT or SMT package.
- 2) Ideal for power switch circuits.
- 3) Mounting cost and area can be cut in half.

●Structure

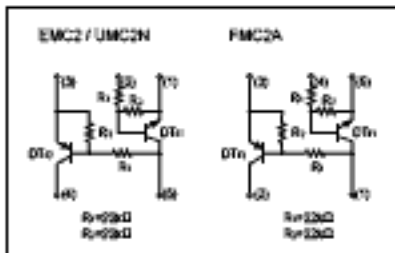
Epitaxial planar type

A PNP and a NPN digital transistor

(each with two built in resistors)

The following characteristics apply to both DTn1 and DTn2, however, the "-" sign on DTn2 values for the PNP type have been omitted.

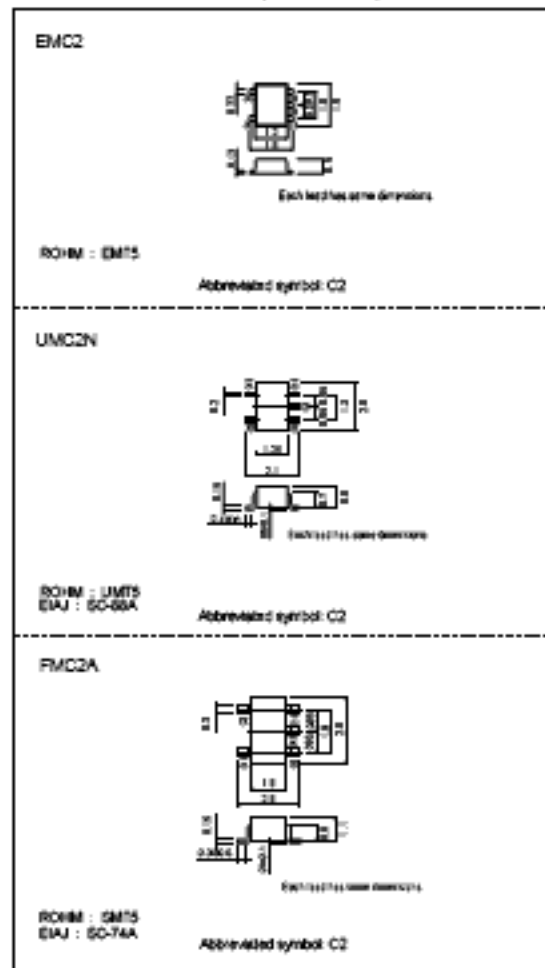
●Equivalent circuit



●Packaging specifications

Type	Packaging	Taping		
	Code	T2R	TR	T148
	Basic ordering unit (pieces)	8000	3000	3000
EMC2		○	-	-
UMC2N		-	○	-
FMC2A		-	-	○

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Supply voltage		V _{CC}	50	V
Input current		V _{ih}	40	V
			-10	
Output current		I _o	30	mA
		I _{o(max)}	100	
Power dissipation	EMC2,UMC2N	P _d	150 (TOTAL)	mW
	FMC2A		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
Input voltage	V _{ih} (t)	-	-	0.5	V	V _{CC} =5V, I _o =100μA
	V _{il} (t)	3	-	-		V _o =0.2V, I _o =5mA
Output voltage	V _o (t)	-	0.1	0.3	V	I _o /I _i =10mA/0.5mA
Input current	I _i	-	-	0.36	mA	V _i =5V
Output current	I _o (t)	-	-	0.5	μA	V _{CC} =50V, V _i =0V
DC current gain	G _i	56	-	-	-	V _o =5V, I _o =5mA
Transition frequency	f _t	-	250	-	MHz	V _{CC} =10mA, I _g =-5mA, f=100MHz *
Input resistance	R _i	15.4	22	28.6	kΩ	-
Resistance ratio	R ₂ /R ₁	0.8	1	1.2	-	-

* Transition frequency of the device