

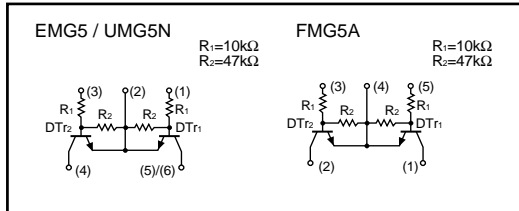
# Emitter common (dual digital transistors)

## EMG5 / UMG5N / FMG5A

●Features

- 1) Two DTC114Y chips in a EMT or UMT or SMT package.

●Equivalent circuit

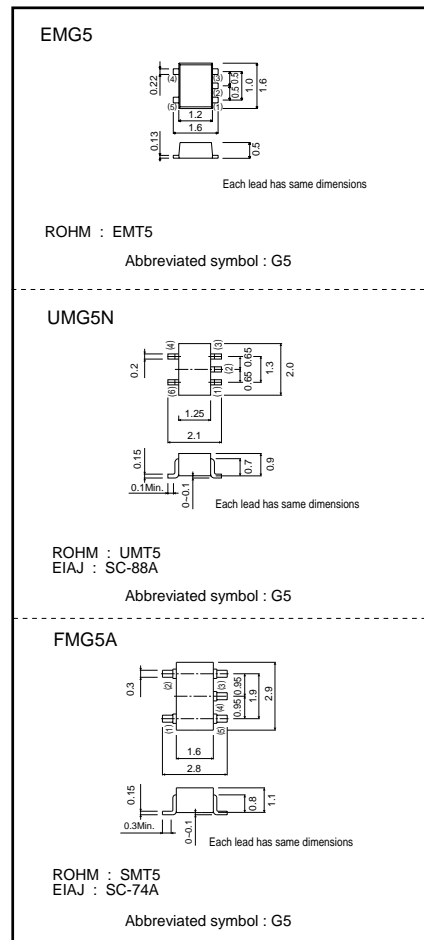


●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit	
Supply voltage	V <sub>CC</sub>	50	V	
Input voltage	V <sub>IN</sub>	40	V	
		-6		
Output current	I <sub>o</sub>	100	mA	
	I <sub>c (Max.)</sub>	100		
Power dissipation	EMG5, UMG5N	Pd	150 (TOTAL)	*1
	FMG5A		300 (TOTAL)	*2
Junction temperature	T <sub>j</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-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
Input voltage	$V_{I(off)}$	–	–	0.3	V	$V_{CC}=5V, I_o=100\mu A$
	$V_{I(on)}$	1.4	–	–		$V_o=0.3V, I_o=1mA$
Output voltage	$V_{O(on)}$	–	0.1	0.3	V	$I_o=5mA, I_i=0.25mA$
Input current	$I_i$	–	–	0.88	mA	$V_i=5V$
Output current	$I_{O(off)}$	–	–	0.5	$\mu A$	$V_{CC}=50V, V_i=0V$
DC current gain	$G_i$	68	–	–	–	$V_o=5V, I_o=5mA$
Transition frequency	$f_T$	–	250	–	MHz	$V_{CE}=-10V, I_E=5mA, f=100MHz$ *
Input resistance	$R_1$	7	10	13	k $\Omega$	–
Resistance ratio	$R_2/R_1$	3.7	4.7	5.7	–	–

\* Transition frequency of the device

## ●Packaging specifications

Type	Package	Taping		
	Code	T2R	TR	T148
	Basic ordering unit (pieces)	8000	3000	3000
EMG5	○	–	–	–
UMG5N	–	○	–	–
FMG5A	–	–	–	○