# Emitter common (dual digital transistors)

# EMA3/UMA3N/FMA3A

#### Features

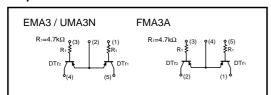
- 1) Two DTA143Ts in a EMT or UMT or SMT package.
- 2) Mounting cost and area can be cut in half.

#### Structure

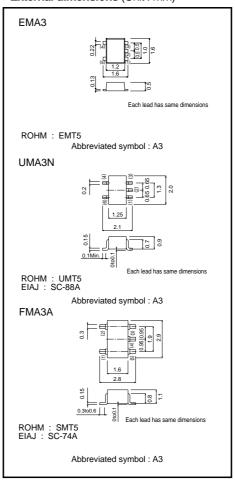
Epitaxial planar type PNP silicon transistor (Built-in resistor type.)

The following characteristics apply to both DTr1 and DTr2.

#### ●Equivalent circuit



#### ●External dimensions (Unit:mm)



#### ● Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit	
Collector-base voltage		Vсво	-50	V	
Collector-emitter voltage		Vceo	-50	V	
Emitter-base voltage		Vebo	-5	V	
Collector current		Ic	-100	mA	
Collector power dissipation	EMA3, UMA3N	Б	150 (TOTAL)	*1 mW	
	FMA3A	Pc	300 (TOTAL)	*2	
Junction temperature		Tj	150	°C	
Storage temperature		Tstg	-55 to +150	°C	

<sup>\*1 120</sup>mW per element must not be exceeded.

### ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions	
Collector-base breakdown voltage	ВУсво	-50	-	-	V	Ic=-50μA	
Collector-emitter breakdown voltage	BVceo	-50	-	-	V	Ic=-1mA	
Emitter-base breakdown voltage	ВУЕВО	-5	-	-	V	I==-50μA	
Collector cutoff current	Ісво	-	-	-0.5	μΑ	VcB=-50V	
DC current transfer ratio	hre	100	250	600	-	Vce/lc=-5V/-1mA	
Emitter cutoff current	ІЕВО	-	-	-0.5	μΑ	V <sub>EB</sub> =-4V	
Collector-emitter saturation voltage	VCE (sat)	-	-	-0.3	V	Ic/I <sub>B</sub> =-5mA/-0.25mA	
Transition frequency	f⊤	-	250	-	MHz	Vce=-10V, Ie=5mA, f=100MHz *	
Input resistance	R <sub>1</sub>	3.29	4.7	6.11	kΩ	_	

<sup>\*</sup> Transition frequency of the device

## Packaging specifications

	Package	Taping			
	Code	T2R	TR	T148	
Туре	Basic ordering unit (pieces)	8000	3000	3000	
EMA3		0	_	_	
UMA3N		_	0	_	
FMA3A		_	_	0	

#### •Electrical characteristic curves

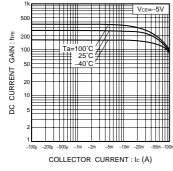


Fig.1 DC current gain vs. collector current

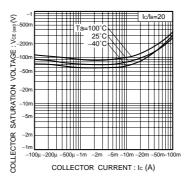


Fig.2 Collector-emitter saturation voltage vs. collector current

<sup>\*2 200</sup>mW per element must not be exceeded.

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