Emitter common (dual digital transistors)

EMG3 / UMG3N / FMG3A

●Features

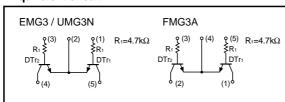
- 1) Two DTC143T chips in a EMT or UMT or SMT
- 2) Mounting cost and area can be cut in half.

Structure

Dual NPN digital transistor (each with a single built in resistors)

The following characteristics apply to both the DTr1 and DTr2.

●Equivalent circuit

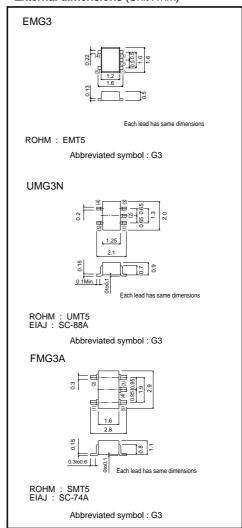


● Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit				
Collector-base voltage		Vсво	50	V				
Collector-emitter voltage		Vceo	50	V				
Emitter-base voltage		VEBO	5	V				
Collector current		lc	100	mA				
Collector power dissipation	EMG3, UMG3N	Pc	150 (TOTAL)	*1 mW *2				
	FMG3A	FC	300 (TOTAL)					
Junction temperature		Tj	150	°C				
Storage temperature		Tstg	-55 to +150	°C				

- *1 120mW per element must not be exceeded. *2 200mW per element must not be exceeded.

●External dimensions (Unit : mm)



●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 _E =50μA	
Collector cutoff current	Ісво	-	_	0.5	μА	VcB=50V	
Emitter cutoff current	ІЕВО	_	_	0.5	μΑ	V _{EB} =4V	
Collector-emitter saturation voltage	VCE (sat)	_	_	0.3	V	Ic/I _B =5mA/0.25mA	
DC current transfer ratio	hfe	100	250	600	_	VcE=5V, Ic=1mA	
Transition frequency	f⊤	_	250	_	MHz	Vc=10V, I==-5mA, f=100MHz *	
Input resistance	R ₁	3.29	4.7	6.11	kΩ	-	

^{*} Transition frequency of the transistor

Packaging specifications

	Package		Taping			
	Code	T2R	TR	T148		
Туре	Basic ordering unit (pieces)	8000	3000	3000		
EMG3		0	_	_		
UMG3N		_	0	_		
FMG3A		_	_	0		

•Electrical characteristic curves

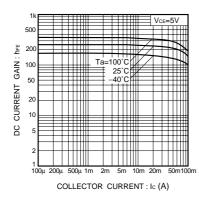


Fig.1 DC current gain vs. collector current

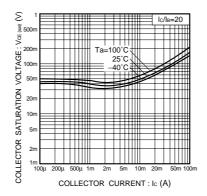


Fig.2 Collector-emitter saturation voltage vs. collector current

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