

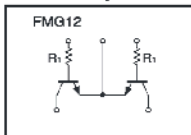
# Emitter common(dual digital transistors)

## FMG12

### ●Features

- 1) Includes two DTC323T transistors in a single SMT package.
- 2) Low  $V_{CE(sat)}$ . Ideal for muting circuit.
- 3) Can be used with  $I_C = 600$  mA

### ●Circuit diagram



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

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	30	V
Collector-emitter voltage	$V_{CEO}$	15	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	600	mA
Collector power dissipation	$P_C$	300 (TOTAL)	mW *
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55~+150	°C

\* 200mW per element must not be exceeded.

### ●Package, marking, and packaging specifications

Part No.	FMG12
Package	SMT6
Marking	G12
Code	T108
Basic ordering unit (pieces)	3000

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	30	—	—	V	$I_C = 50 \mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	15	—	—	V	$I_C = 1 mA$
Emitter-base breakdown voltage	$BV_{EBO}$	5	—	—	V	$I_E = 50 \mu A$
Collector cutoff current	$I_{CBO}$	—	—	0.5	$\mu A$	$V_{CB} = 20V$
Emitter cutoff current	$I_{EBO}$	—	—	0.5	$\mu A$	$V_{EB} = 4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.04	0.08	V	$I_C/I_E = 50mA/2.5mA$
DC current transfer ratio	$h_{FE}$	100	250	600	—	$V_{CE} = 5V, I_C = 50mA$ *1
Transition frequency	$f_T$	—	200	—	MHz	$V_{CE} = 10V, I_E = -50mA, f = 100MHz$ *2
Output ON resistance	$R_{on}$	—	0.55	—	$\Omega$	$V_I = 7V, R_L = 1k\Omega, f = 1kHz$
Input resistance	$R_1$	1.54	2.2	2.66	k $\Omega$	—

\*1 Measured using pulse current \*2 Transition frequency of mounted transistor

(96-417-C323T)

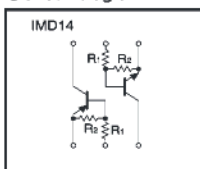
# General purpose (dual digital transistors)

## IMD14

### ●Features

- 1) Two 500 mA digital transistor chips in a SMT package.
- 2) The drive transistors are independent, eliminating interference.

### ●Circuit diagram



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

Parameter	Symbol	Limits	Unit
Supply voltage	$V_{CC}$	50	V
Input voltage	$V_{IN}$	5	V
		-5	
Output current	$I_C$	500	mA
Power dissipation	$P_d$	300 (TOTAL)	mW *
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55~+150	°C

\* 200mW per element must not be exceeded. PNP type negative symbols have been omitted.

### ●Package, marking, and packaging specifications

Part No.	IMD14
Package	SMT6
Marking	D14
Code	T108
Basic ordering unit (pieces)	3000

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I(sat)}$	—	—	0.3	V	$V_{CC} = 5V, I_C = 100 \mu A$
	$V_{I(off)}$	1.1	—	—		$V_O = 0.3V, I_C = 1mA$
Output voltage	$V_{O(sat)}$	—	—	0.3	V	$I_C/I_E = 100mA/5mA$
Input current	$I_i$	—	—	17	mA	$V_I = 3V$
Output current	$I_{O(sat)}$	—	—	0.5	$\mu A$	$V_{CC} = 50V, V_I = 0V$
DC current gain	$G_1$ *1	82	—	—	—	$I_C = 100mA, V_O = 5V$ *1
Transition frequency	$f_T$ *2	—	250	—	MHz	$V_{CE} = 10V, I_E = -50mA, f = 100MHz$ *2
Input resistance	$R_1$	154	220	286	$\Omega$	—
Resistance ratio	$R_2/R_1$	36.3	45.5	54.6	—	—

\*1 Measured using pulse current \*2 Transition frequency of the device  
PNP type negative symbols have been omitted.

(96-470-IMD14)