

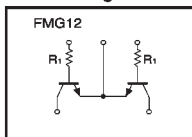
Emitter common(dual digital transistors)

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 ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	15	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_C	600	mA
Collector power dissipation	P_C	300 (TOTAL)	mW *
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

* 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 ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	30	—	—	V	$I_C = 50 \mu\text{A}$
Collector-emitter breakdown voltage	BV_{CEO}	15	—	—	V	$I_C = 1\text{mA}$
Emitter-base breakdown voltage	BV_{EB0}	5	—	—	V	$I_E = 50 \mu\text{A}$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 20\text{V}$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB} = 4\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.04	0.08	V	$I_C/I_E = 50\text{mA}/2.5\text{mA}$
DC current transfer ratio	h_{FE}	100	250	600	—	$V_{CE} = 5\text{V}$, $I_C = 50\text{mA}$ *1
Transition frequency	f_T	—	200	—	MHz	$V_{CE} = 10\text{V}$, $I_E = -50\text{mA}$, $f = 100\text{MHz}$ *2
Output ON resistance	R_{on}	—	0.55	—	Ω	$V_I = 7\text{V}$, $R_L = 1\text{k}\Omega$, $f = 1\text{kHz}$
Input resistance	R_i	1.54	2.2	2.86	$\text{k}\Omega$	—

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

(96-417-C323T)

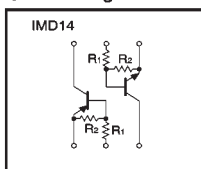
General purpose (dual digital transistors)

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 ($T_a = 25^\circ\text{C}$)

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

* 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 ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V_I (off)	—	—	0.3	V	$V_{CC} = 5\text{V}$, $I_O = 100 \mu\text{A}$
	V_I (on)	1.1	—	—	—	$V_O = 0.3\text{V}$, $I_O = 1\text{mA}$
Output voltage	V_O (on)	—	—	0.3	V	$I_O/I_I = 100\text{mA}/5\text{mA}$
Input current	I_I	—	—	17	mA	$V_I = 3\text{V}$
Output current	I_O (off)	—	—	0.5	μA	$V_{CC} = 50\text{V}$, $V_I = 0\text{V}$
DC current gain	G_{I*1}	82	—	—	—	$I_O = 100\text{mA}$, $V_O = 5\text{V}$ *1
Transition frequency	f_T *2	—	250	—	MHz	$V_{CE} = 10\text{V}$, $I_E = -50\text{mA}$, $f = 100\text{MHz}$ *2
Input resistance	R_i	154	220	286	Ω	—
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)