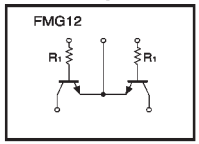
Emitter common(dual digital transistors)

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 Ic = 600 mA

●**Circuit diagram**



●**Absolute maximum ratings** (Ta=25℃)

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	Pc	300 (TOTAL)	mW	＊
Junction temperature	Tj	150	℃	
Storage temperature	Tstg	−55～+150	℃	

＊ 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℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	30	—	—	V	I_C=50 μA
Collector-emitter breakdown voltage	BV_{CEO}	15	—	—	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	I_E=50 μA
Collector cutoff current	I_{CBO}	—	—	0.5	μA	V_{CB}=20V
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	V_{EB}=4V
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.04	0.08	V	I_C/I_B=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	Ron	—	0.55	—	Ω	V_I=7V , R_L=1kΩ , f=1kHz
Input resistance	R_1	1.54	2.2	2.86	kΩ	—

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

(96-417-C323T)

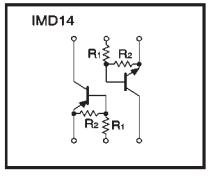
General purpose (dual digital transistors)

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℃)

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	Pd	300 (TOTAL)	mW	＊
Junction temperature	Tj	150	℃	
Storage temperature	Tstg	−55～+150	℃	

＊ 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℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	—	—	0.3	V	V_{CC}=5V , I_O=100 μA
	$V_{I(on)}$	1.1	—	—		V_O=0.3V , I_O=1mA
Output voltage	$V_{O(on)}$	—	—	0.3	V	I_O/I_I=100mA/5mA
Input current	I_I	—	—	17	mA	V_I=3V
Output current	$I_{O(off)}$	—	—	0.5	μA	V_{CC}=50V , V_I=0V
DC current gain	G_I＊1	82	—	—	—	I_O=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	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)