

Transistors

# IMD14 General purpose (dual digital transistors)

## IMD14

●Features

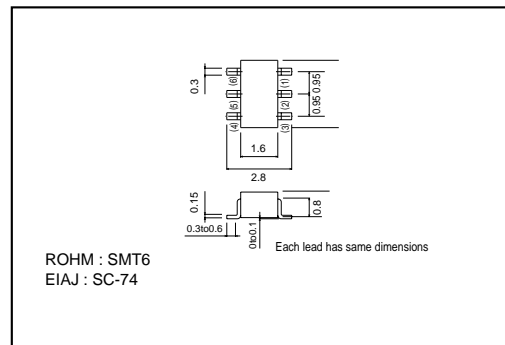
- 1) Two 500 mA digital transistor chips in a SMT package.
- 2) The drive transistors are independent, eliminating interference.

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V <sub>CC</sub>	50	V
Input voltage	V <sub>IN</sub>	5	V
		-5	
Output current	I <sub>C</sub>	500	mA
Power dissipation	P <sub>d</sub>	300 (TOTAL)	mW *
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55~+150	°C

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

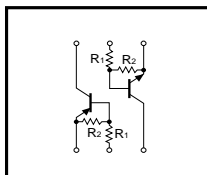
●External dimensions (Units : mm)



●Package, marking, and packaging specifications

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

●Equivalent circuit



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V <sub>I (off)</sub>	-	-	0.3	V	V <sub>CC</sub> =5V , I <sub>C</sub> =100μA
	V <sub>I (on)</sub>	1.1	-	-		V <sub>O</sub> =0.3V , I <sub>C</sub> =50mA
Output voltage	V <sub>O (on)</sub>	-	-	0.3	V	I <sub>C</sub> /I <sub>E</sub> =100mA/5mA
Input current	I <sub>I</sub>	-	-	17	mA	V <sub>I</sub> =3V
Output current	I <sub>O (off)</sub>	-	-	0.5	μA	V <sub>CC</sub> =50V , V <sub>I</sub> =0V
DC current gain	G <sub>I</sub> *1	82	-	-	-	I <sub>C</sub> =100mA , V <sub>O</sub> =5V *1
Transition frequency	f <sub>T</sub> *2	-	250	-	MHz	V <sub>CE</sub> =10V , I <sub>E</sub> =-50mA , f=100MHz *2
Input resistance	R <sub>I</sub>	154	220	286	Ω	-
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>	36.3	45.5	54.6	-	-

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

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