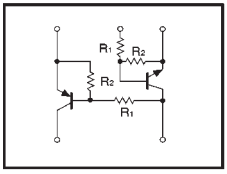
Power management (dual digital transistors)

FMC6A

●Features

1) Both the DTA115E and DTC115E chips in a SMT package.

●Circuit diagram



●Absolute maximum ratings (Ta=25℃)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	40	V
		−10	
Output current	I_C	100	mA
	I_O	20	mA
Power dissipation	Pd	300 (TOTAL)	mW
Storage temperature	Tstg	−55~+150	℃

PNP type negative symbols have been omitted.

●Package, marking, and packaging specifications

Part No.	FMC6A
Package	SMT5
Marking	C6
Code	T148
Basic ordering unit (pieces)	3000

●Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	—	—	0.5	V	V_{CC}=5/−5V , I_O=100/−100 μA
	$V_{I(on)}$	3	—	—		V_O=0.3/−0.3V , I_O=1/−1mA
Output voltage	$V_{O(on)}$	—	0.1	0.3	V	I_C=5/−5mA , I_I=0.25/−0.25mA
Input current	I_I	—	—	0.15	mA	V_I=5/−5V
Output current	$I_{O(off)}$	—	—	0.5	μA	V_{CC}=50/−50V
DC current gain	G_I	82	—	—	—	I_O=5/−5mA , V_O=5/−5V
Transition frequency	f_T	—	250	—	MHz	V_{CE}=10V/−10V , I_E=−5mA/5mA , f=100MHz ＊
Input resistance	R_1	70	100	130	kΩ	—
Resistance ratio	R_2/R_1	0.8	1	1.2	—	—

＊Transition frequency of mounted transistor. PNP type negative symbols have been omitted.

(94S-830-AC115E)

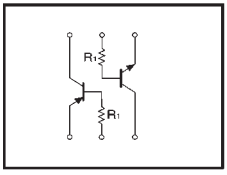
Power management (dual digital transistors)

IMD1A

●Features

1) Both the DTA124T and DTC124T chips in a SMT package.

●Circuit diagram



●Absolute maximum ratings (Ta=25℃)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	100	mA
Collector power dissipation	Pc	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

Type	IMD1A
Package	SMT6
Marking	D1
Code	T108
Basic ordering unit (pieces)	3000

●Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	50	—	—	V	I_C=50 μA
Collector-emitter breakdown voltage	BV_{CEO}	50	—	—	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}=50V
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	V_{EB}=4V
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	I_C/I_B=5mA/0.5mA
DC current transfer ratio	h_{FE}	100	250	600	—	V_{CE}=5V, I_C=1mA
Transition frequency	f_T	—	250	—	MHz	V_{CE}=10V, I_E=−5mA , f=100MHz ＊
Input resistance	R_1	15.4	22	28.6	kΩ	—

＊ Transition frequency of mounted transistor. PNP type negative symbols have been omitted.

(96-458-AC124T)

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