

Transistors

General purpose (dual digital transistors)

UMA1N / UMB1N / UMB5N / FMA1A / IMB1A / IMB5A

●Features

- 1) Two DTA124E chips in a UMT or SMT package.

●Absolute maximum ratings (Ta = 25°C)

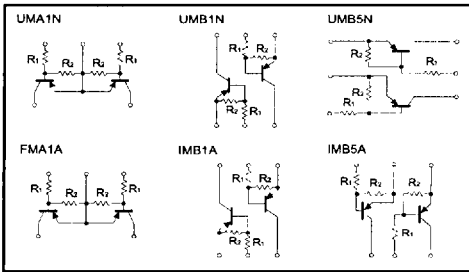
Parameter	Symbol	Limits	Unit
Supply voltage	Vcc	-50	V
Input voltage	Vin	-40	V
		10	V
Output current	Io	-100	mA
Power dissipation	Pd	150(TOTAL) 300(TOTAL)	mW *1
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 ~ +150	°C

*1 120mW per element must not be exceeded.
*2 200mW per element must not be exceeded.

●Package, marking, and packaging specifications

Part No.	UMA1N	UMB1N	UMB5N	FMA1A	IMB1A	IMB5A
Package	UMT5	UMT6	UMT6	SMT5	SMT6	SMT6
Marking	A1	B1	B5	A1	B1	B5
Code	TR	TN	TR	T148	T110	T110
Basic ordering unit (pieces)	3000	3000	3000	3000	3000	3000

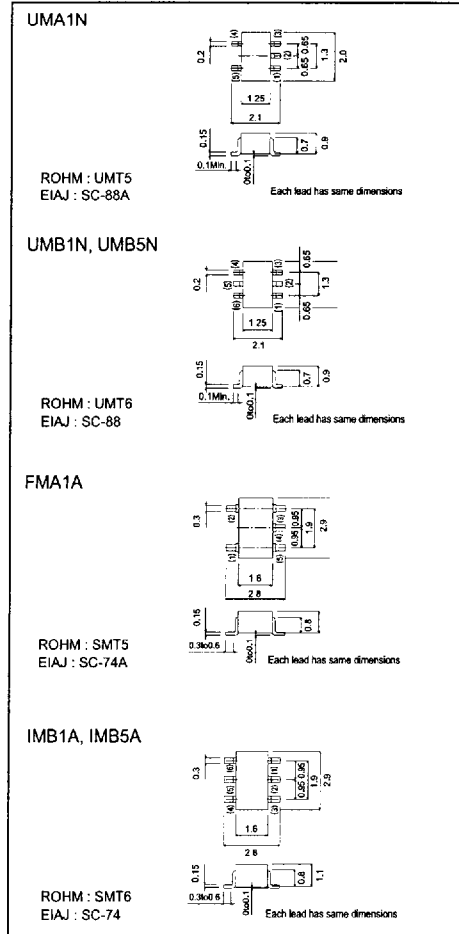
●Circuit schematic



●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V _{off}	-	-	-0.5	V	V _{cc} = -5V, I _o = -100μA
	V _{on}	-3	-	-	V	V _o = -0.2V, I _o = -5mA
Output voltage	V _{off}	-	-0.1	-0.3	V	I _b /I _c = -0.5mA/-10mA
Input current	I _i	-	-	-0.36	mA	V _i = -5V
Output current	I _{off}	-	-	-0.5	μA	V _{cc} = -50V, V _i = 0V
DC current gain	G _i	56	-	-	-	V _o = -5V, I _o = -5mA
Input resistance	R _i	15.4	22	28.6	kΩ	-
Resistance ratio	R ₂ /R ₁	0.8	1	1.2	-	-

●External dimensions (Units : mm)



LED lamps

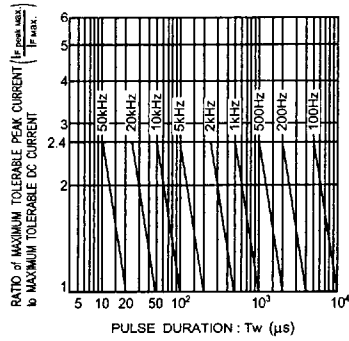


Fig. 23 Maximum tolerable peak current vs. pulse duration

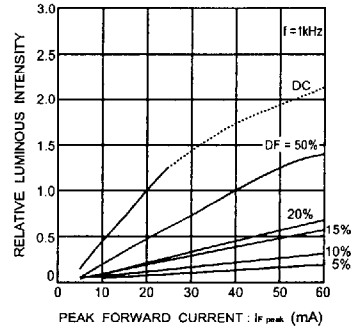


Fig. 24 Luminous intensity vs. peak forward current

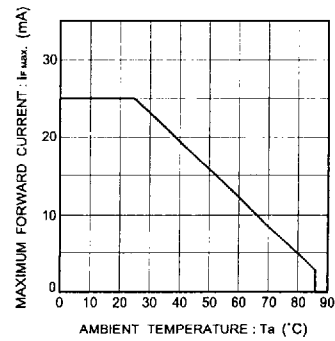


Fig. 25 Maximum forward current vs. ambient temperature

● Electrical characteristics curves 5 (SML-210MT, SML-210FT, SML-210PT) (green)

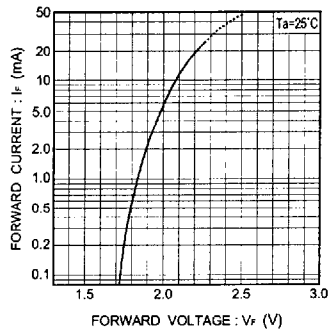


Fig. 26 Forward current vs. forward voltage

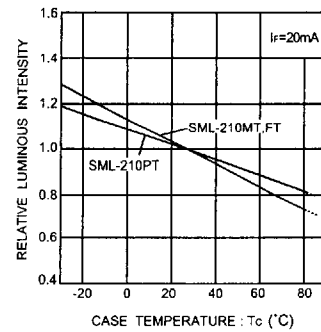


Fig. 27 Luminous intensity vs. case temperature

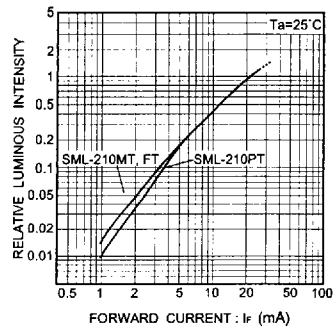


Fig. 28 Luminous intensity vs. forward current

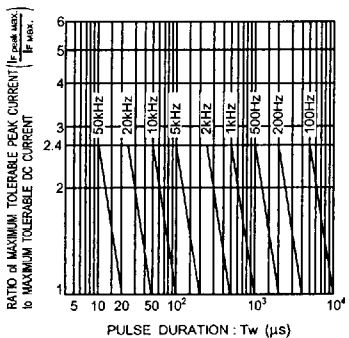


Fig. 29 Maximum tolerable peak current vs. pulse duration

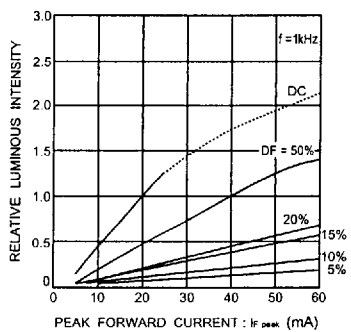


Fig. 30 Luminous intensity vs. peak forward current

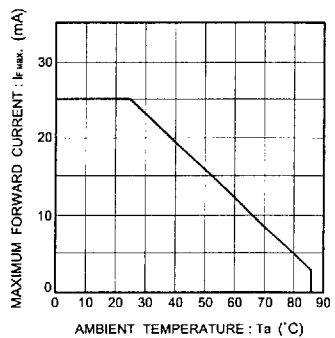


Fig. 31 Maximum forward current vs. ambient temperature