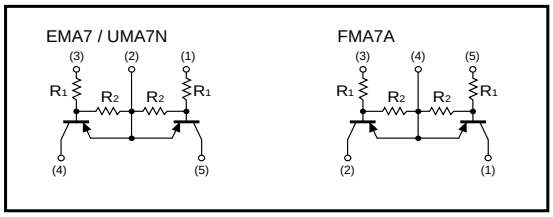
Emitter common (dual digital transistors)

EMA7 / UMA7N / FMA7A

●Features

1) Two DTA143X chips in a EMT or UMT or SMT package.

●Equivalent circuit



●Package, marking, and packaging specifications

Type	EMA7	UMA7N	FMA7A
Package	EMT5	UMT5	SMT5
Marking	A7	A7	A7
Code	T2R	TR	T148
Basic ordering unit (pieces)	8000	3000	3000

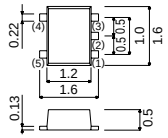
●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Supply voltage		V_{CC}	–50	V
Input voltage		V_{IN}	–20	V
			7	
Output current		I_O	–100	mA
Power dissipation	EMA7 / UMA7N	Pd	150(TOTAL)	mW ∗1
	FMA7A		300(TOTAL)	∗2
Junction temperature		Tj	150	°C
Storage temperature		Tstg	–55 to +150	°C

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

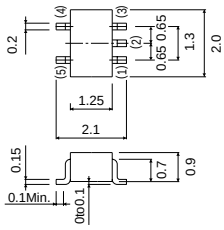
●External dimensions (Unit : mm)

EMA7



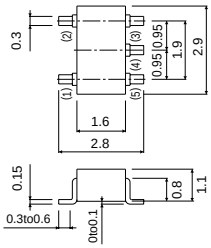
ROHM : EMT5
Each lead has same dimensions

UMA7N



ROHM : UMT5
EIAJ : SC-88A
Each lead has same dimensions

FMA7A



ROHM : SMT5
EIAJ : SC-74A
Each lead has same dimensions

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●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I\ (off)}$	–	–	–0.3	V	V_{CC}=–5V, I_O=–100μA
	$V_{I\ (on)}$	–2.5	–	–		V_O=–0.3V, I_O=–20mA
Output voltage	$V_{O\ (on)}$	–	–0.1	–0.3	V	I_O/I_I=–10mA/–0.5mA
Input current	I_I	–	–	–1.8	mA	V_I=–5V
Output current	$I_{O\ (off)}$	–	–	–0.5	μA	V_{CC}=–50V, V_I=0V
DC current gain	G_I	30	–	–	–	V_O=–5V, I_O=–10mA
Transition frequency	f_T	–	250	–	MHz	V_{CE}=–10V, I_E=5mA, f=100MHz ＊
Input resistance	R_1	3.29	4.7	6.11	kΩ	–
Resistance ratio	R_2 / R_1	1.7	2.1	2.6	–	–

＊Transition frequency of the device.

●Electrical characteristics curves

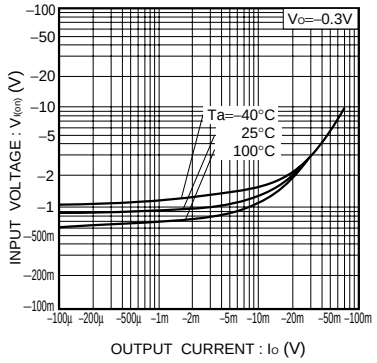


Fig.1 Input voltage vs. output current (ON characteristics)

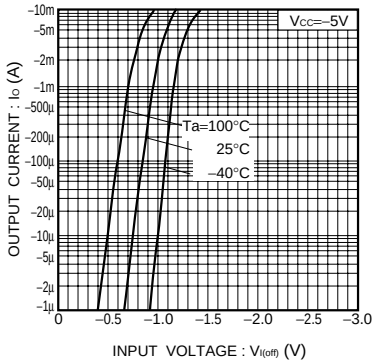


Fig.2 Output current vs. input voltage (OFF characteristics)

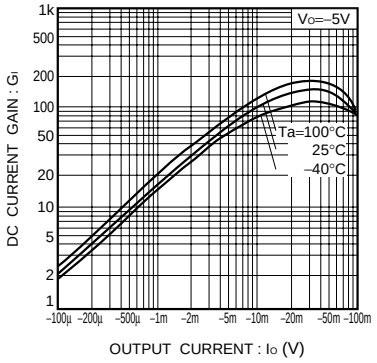


Fig.3 DC current gain vs. output current

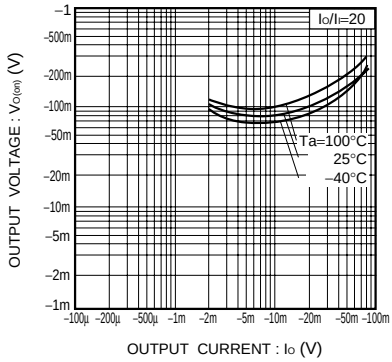


Fig.4 Output voltage vs. output current

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