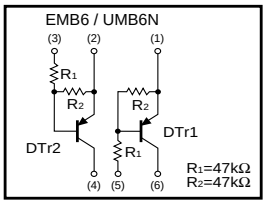
General purpose (dual digital transistors)

EMB6 / UMB6N

●Feature

1) Two DTA144E chips in a EMT or UMT package.

●Equivalent circuit



●Package, marking, and packaging specifications

Type	EMB6	UMB6N
Package	EMT6	UMT6
Marking	B6	B6
Code	T2R	TR
Basic ordering unit (pieces)	8000	3000

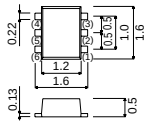
●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	−50	V
Input voltage	V_{IN}	−40	V
		10	
Output current	I_O	30	mA
Power dissipation	Pd	150(TOTAL)	mW ∗1
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−55~+150	°C

∗1 120mW per element must not be exceeded.

●External dimensions (Unit : mm)

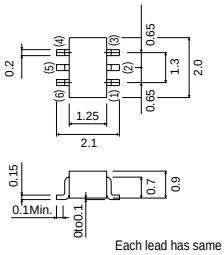
EMB6



Each lead has same dimensions

ROHM : EMT6

UMB6N



Each lead has same dimensions

ROHM : UMT6
EIAJ : SC-88

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	−	−	−0.5	V	V_{CC}=−5V, I_O=−100μA
	$V_{I(on)}$	−3.0	−	−		V_O=−0.3V, I_O=−2mA
Output voltage	$V_{O(on)}$	−	−0.1	−0.3	V	I_O=−10mA, I_I=−0.5mA
Input current	I_I	−	−	−0.18	mA	V_I=−5V
Output current	$I_{O(off)}$	−	−	−0.5	μA	V_{CC}=−50V, V_I=0V
DC current gain	G_I	68	−	−	−	I_O=−5mA, V_O=−5V
Input resistance	R_1	32.9	47	61.1	kΩ	−
Resistance ratio	R_2 / R_1	0.8	1.0	1.2	−	−
Transition frequency	f_T	−	250	−	MHz	V_{CE}=−10V, I_E=5mA, f=100MHz ∗

∗Transition frequency of the device.

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●**Electrical characteristics curve**

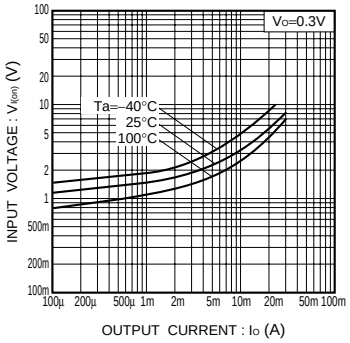

Fig.1 Input voltage vs. output current (ON characteristics)

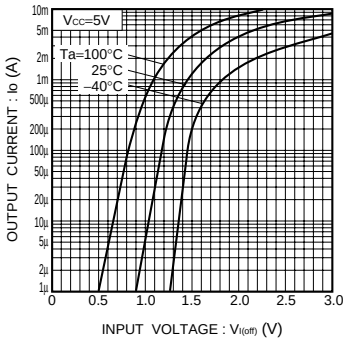

Fig.2 Output current vs. input voltage (OFF characteristics)

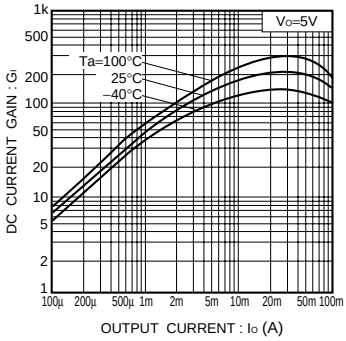

Fig.3 DC current gain vs. output current

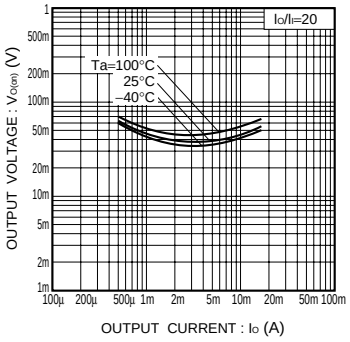

Fig.4 Output voltage vs. output current

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