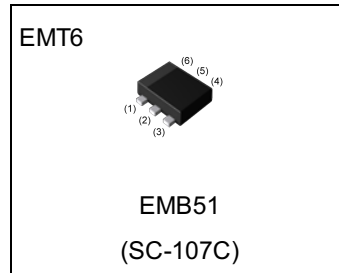


Parameter	DTr1 and DTr2
V_{CC}	-50V
$I_{C(MAX.)}$	-100mA
R_1	22k Ω
R_2	22k Ω

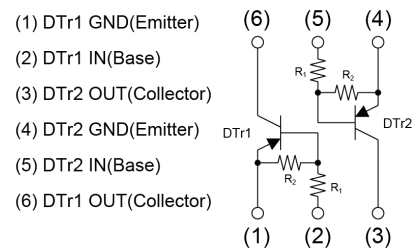
●Features

- 1) Two DTA024E chips in a EMT6 package.
- 2) Transister elements are independent, eliminating interface.
- 3) Mounting cost and area can be cut in half.
- 4) Lead Free/RoHS Compliant.

●Outline



●Inner circuit



●Application

Switching circuit, Inverter circuit, Interface circuit,
 Driver circuit

●Packaging specifications

Part No.	Package	Package size	Taping code	Reel size (mm)	Tape width (mm)	Basic ordering unit.(pcs)	Marking
EMB51	EMT6	1616	T2R	180	8	8000	B51

● **Absolute maximum ratings** ($T_a = 25^\circ\text{C}$)

<For DTr1 and DTr2 in common>

Parameter	Symbol	Values	Unit
Supply voltage	V_{CC}	-50	V
Input voltage	V_{IN}	-40 to 10	V
Output current	I_O	-30	mA
Collector current	$I_{C(MAX)}^{*1}$	-100	mA
Power dissipation	P_D^{*2*3}	150(Total)	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Range of storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

● **Electrical characteristics** ($T_a = 25^\circ\text{C}$)

<For DTr1 and DTr2 in common>

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Input voltage	$V_{I(off)}$	$V_{CC} = -5V, I_O = -0.1\text{mA}$	-	-	-0.5	V
	$V_{I(on)}$	$V_O = -0.3V, I_O = -5\text{mA}$	-3	-	-	
Output voltage	$V_{O(on)}$	$I_O / I_I = -5\text{mA} / -0.5\text{mA}$	-	-0.07	-0.15	V
Input current	I_I	$V_I = -5V$	-	-	-0.36	mA
Output current	$I_{O(off)}$	$V_{CC} = -50V, V_I = 0V$	-	-	-0.5	μA
DC current gain	G_I	$V_O = -10V, I_O = -5\text{mA}$	60	-	-	-
Input resistance	R_1	-	15.4	22	28.6	k Ω
Resistance ratio	R_2/R_1	-	0.8	1	1.2	-
Transition frequency	f_T^{*1}	$V_{CE} = -10V, I_E = 5\text{mA},$ $f = 100\text{MHz}$	-	250	-	MHz

*1 Characteristics of built-in transistor.

*2 terminal mounted on a reference footprint.

*3 120mW per element must not be exceeded.

●Electrical characteristic curves(Ta=25°C)

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

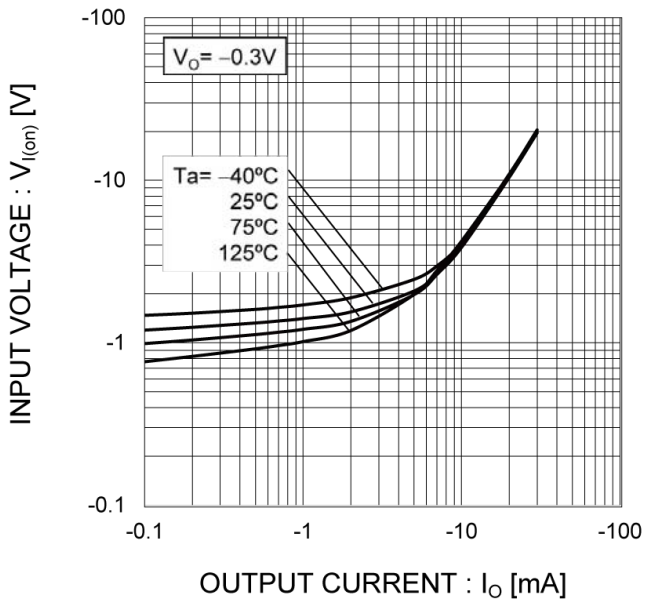


Fig.2 Output current vs. input voltage (OFF characteristics)

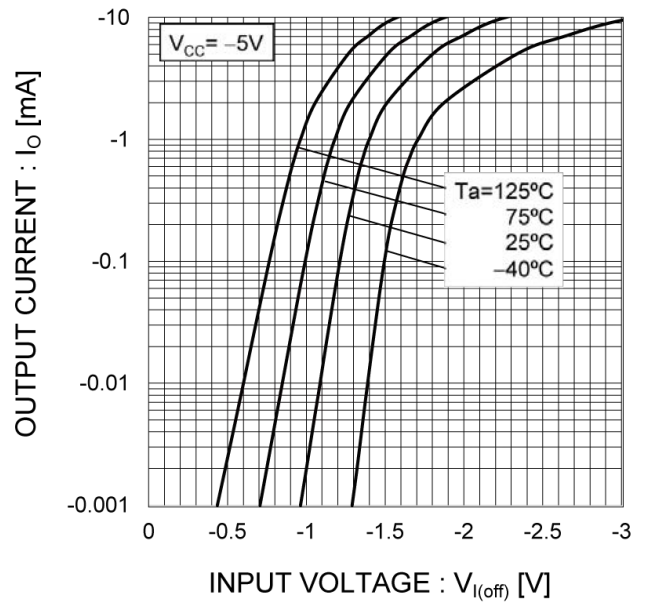


Fig.3 Output current vs. output voltage

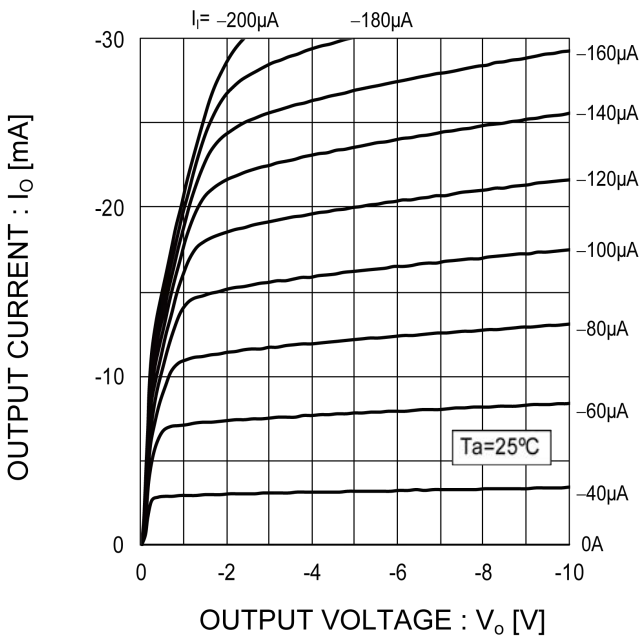
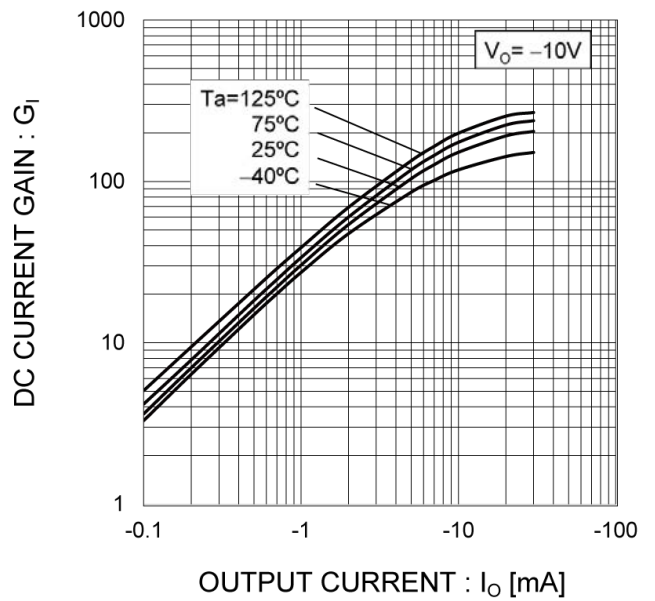


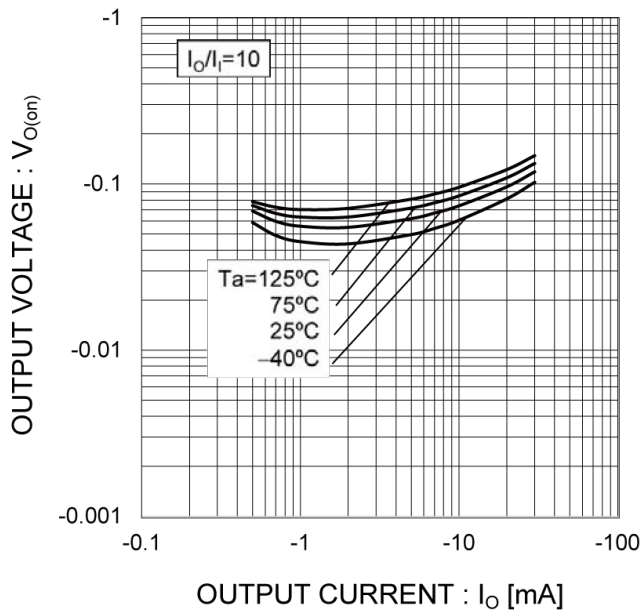
Fig.4 DC current gain vs. output current



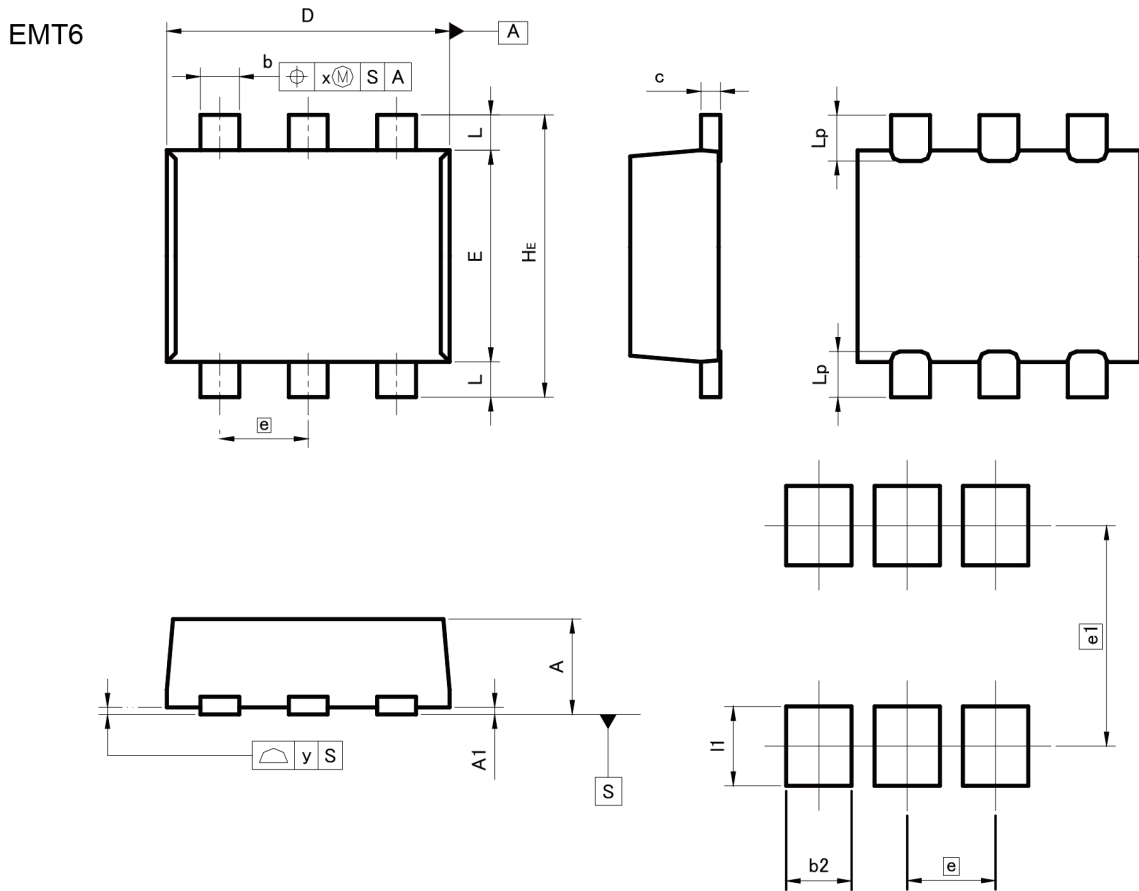
● Electrical characteristic curves ($T_a=25^\circ\text{C}$)

<For DTr1 and Tr2 in common>

Fig.5 Output voltage vs. output current



●Dimensions



Pattern of terminal position areas
[Not a recommended pattern of soldering pads]

DIM	MILIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.45	0.55	0.018	0.022
A1	0.00	0.10	0.000	0.004
b	0.17	0.27	0.007	0.011
c	0.08	0.18	0.003	0.007
D	1.50	1.70	0.059	0.067
E	1.10	1.30	0.043	0.051
e	0.50		0.020	
HE	1.50	1.70	0.059	0.067
L	0.10	0.30	0.004	0.012
Lp	-	0.35	-	0.014
x	-	0.10	-	0.004
y	-	0.10	-	0.004

DIM	MILIMETERS		INCHES	
	MIN	MAX	MIN	MAX
b2	-	0.37	-	0.015
e1	1.25		0.049	
I1	-	0.45	-	0.018

Dimension in mm/inches

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