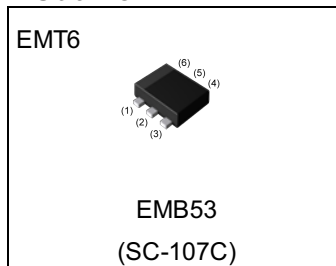


Parameter	DTr1 and DTr2
V_{CEO}	-50V
I_C	-100mA
R_1	4.7k Ω

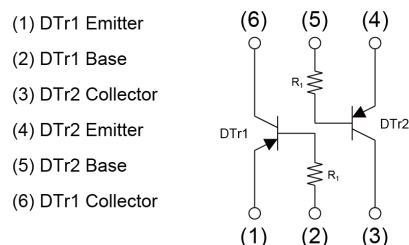
●Outline



●Features

- 1) Two DTA043T chips in a EMT6 package.
- 2) Transistor elements are independent, eliminating interface.
- 3) Mounting cost and area can be cut in half.
- 4) Lead Free/RoHS Compliant.

●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
EMB53	EMT6	1616	T2R	180	8	8000	B53

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

<For DTr1 and DTr2 in common>

Parameter	Symbol	Values	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
Power dissipation	P_{D}^{*1*2}	150	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.	
Collector-base breakdown voltage	BV_{CBO}	$I_{\text{C}} = -50\mu\text{A}$	-50	-	-	V
Collector-emitter breakdown voltage	BV_{CEO}	$I_{\text{C}} = -1\text{mA}$	-50	-	-	V
Emitter-base breakdown voltage	BV_{EBO}	$I_{\text{E}} = -50\mu\text{A}$	-5	-	-	V
Collector cut-off current	I_{CBO}	$V_{\text{CB}} = -50\text{V}$	-	-	-0.5	μA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}} = -4\text{V}$	-	-	-0.5	μA
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = -5\text{mA}$, $I_{\text{B}} = -0.5\text{mA}$	-	-0.07	-0.15	V
DC current gain	h_{FE}	$V_{\text{CE}} = -10\text{V}$, $I_{\text{C}} = -5\text{mA}$	100	-	600	-
Input resistance	R_1	-	3.29	4.7	6.11	k Ω
Transition frequency	f_{T}^{*3}	$V_{\text{CE}} = -10\text{V}$, $I_{\text{E}} = -10\text{V}$, $f = 100\text{MHz}$	-	250	-	MHz

*1 terminal mounted on a reference footprint.

*2 120mW per element must not be exceeded.

*3 Characteristics of built-in transistor.

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

<For Tr1 and Tr2 in common>

Fig.1 Grounded emitter propagation characteristics

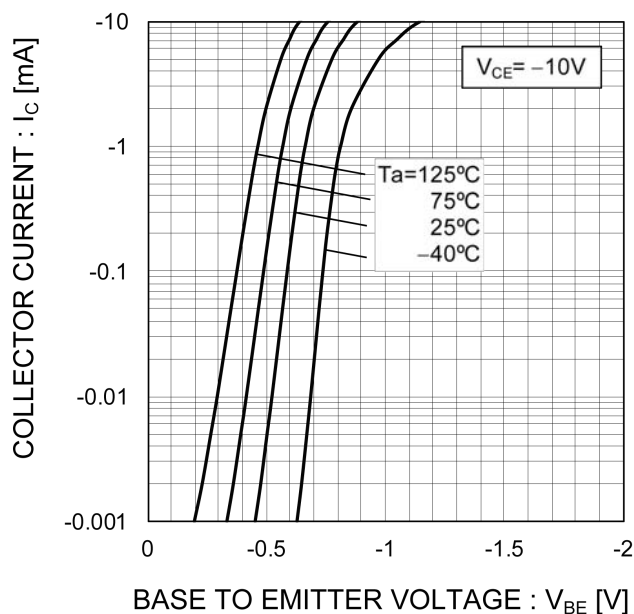


Fig.2 Grounded emitter output characteristics

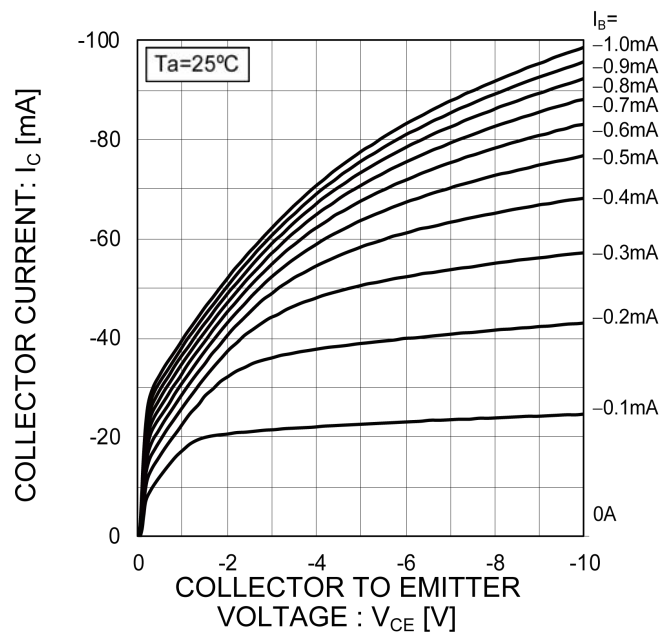


Fig.3 DC Current gain vs. Collector Current

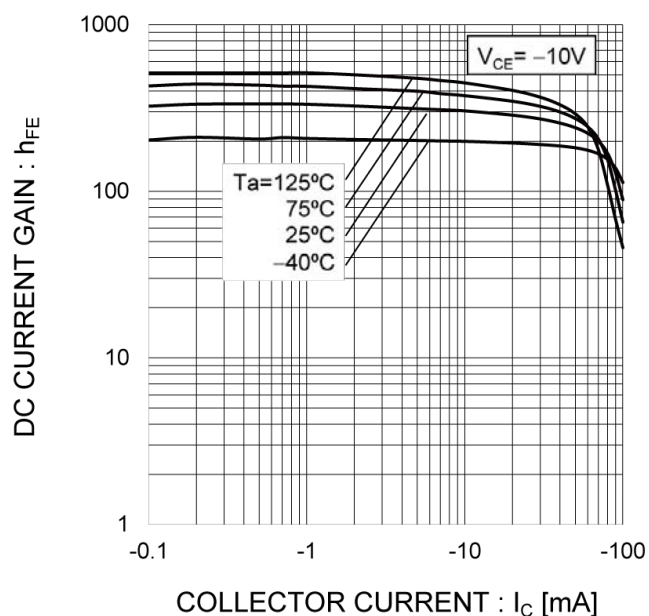
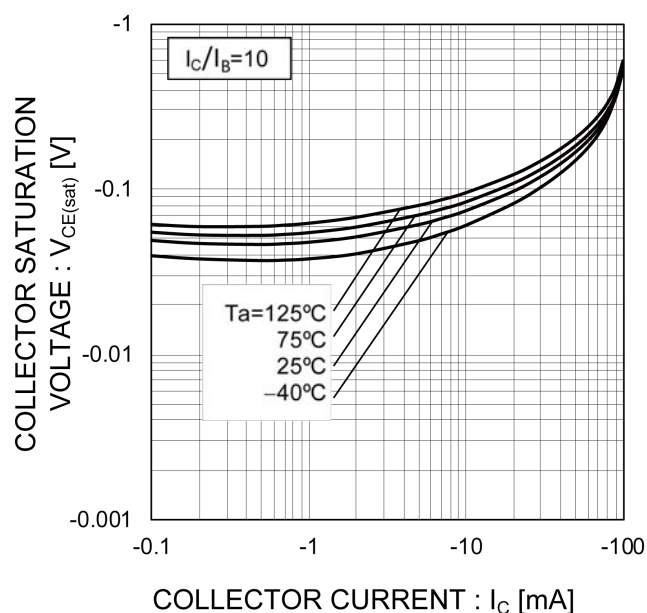
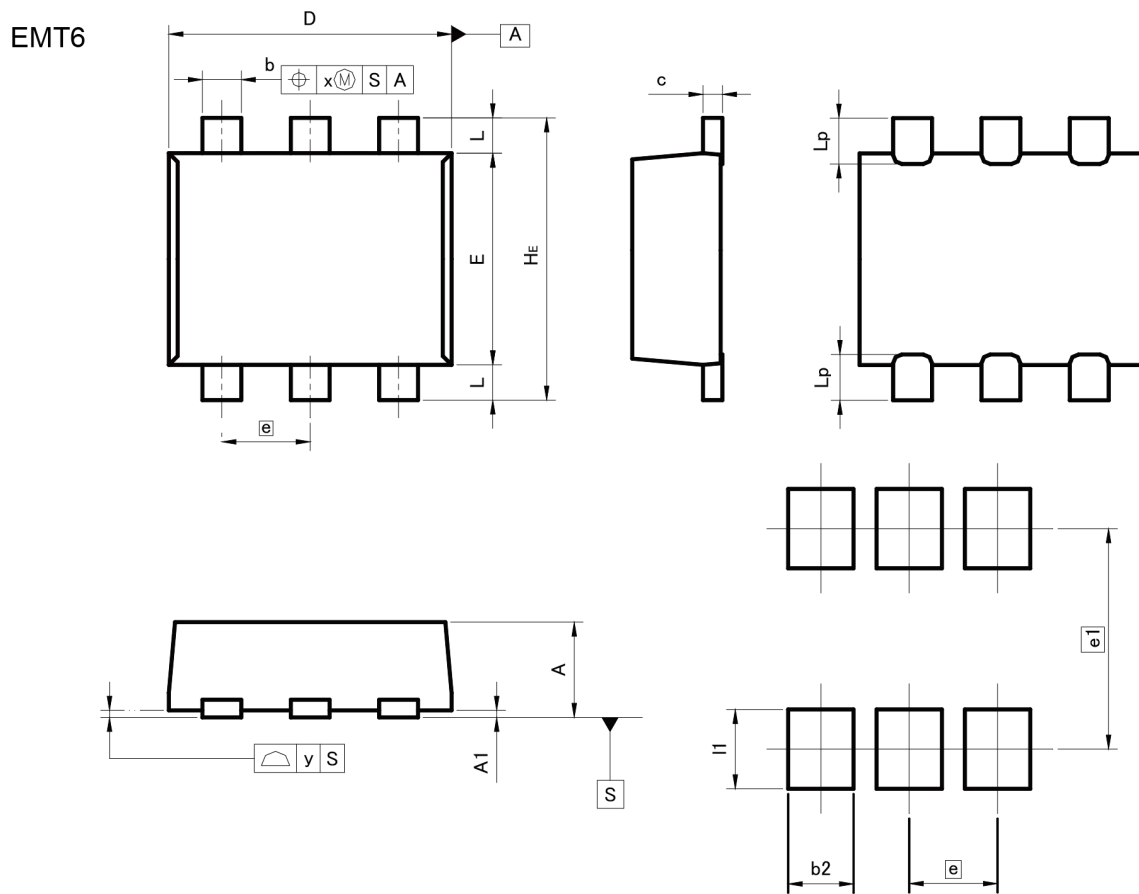


Fig.4 Collector-emitter saturation voltage vs. Collector Current



●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	
l1	–	0.45	–	0.018

Dimension in mm/inches

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