

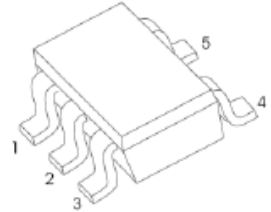
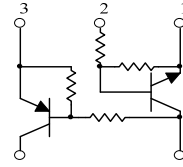


UMC4N Dual Digital Transistors (NPN+PNP)

FEATURES

- DTC144E and DTA114Y transistors are built-in a package

MARKING: C4



SOT-353

NPN DTC144E Absolute maximum ratings (T_a=25°C)

Parameter	Symbol	Value	Unit
Supply voltage	V _{CC}	50	V
Input voltage	V _{IN}	-10~40	V
Output current	I _O	100	mA
	I _{C(MAX)}	100	
Power dissipation	P _C	150	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55~150	°C

Electrical characteristics (T_a=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		V _O =0.3V, I _O =2mA
Output voltage	V _{O(on)}			0.3	V	I _O /I _I =10mA/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 =0
DC current gain	G _I	68				V _O =5V, I _O =5mA
Input resistance	R ₁	32.9	47	61.1	KΩ	
Resistance ratio	R ₂ /R ₁	0.8	1	1.2		
Transition frequency	f _T		250		MHz	V _{CE} =10V, I _E =-5mA, f=100MHz

PNP DTA114Y Absolute maximum ratings (T_a=25°C)

Parameter	Symbol	Value	Unit
Supply voltage	V _{CC}	-50	V
Input voltage	V _{IN}	-40~ +6	V
Output current	I _O	-70	mA
	I _{C(MAX)}	-100	
Power dissipation	P _C	150	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55~150	°C

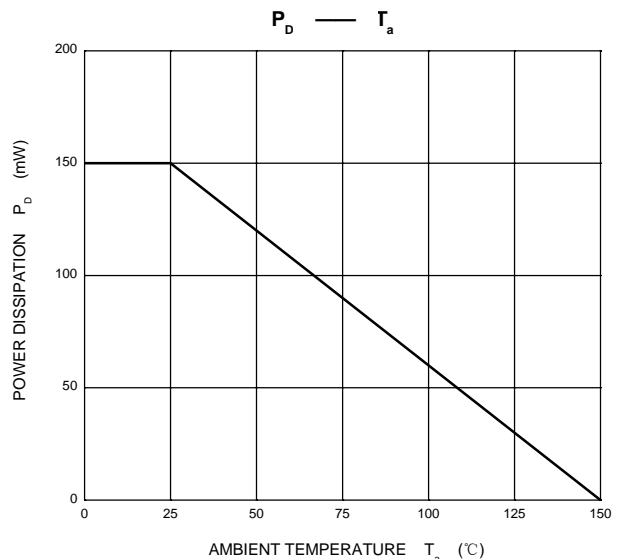
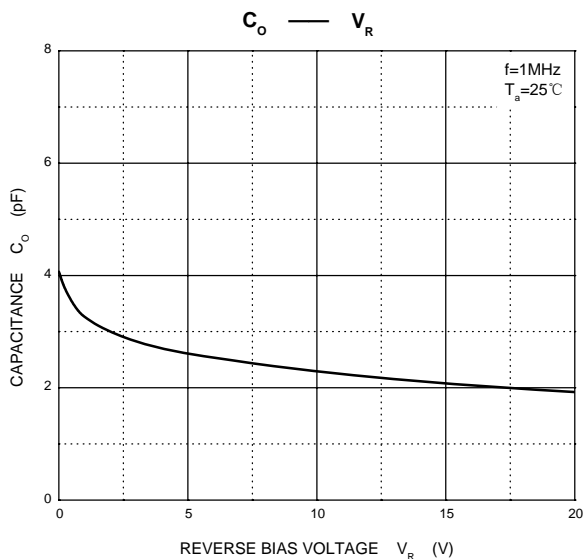
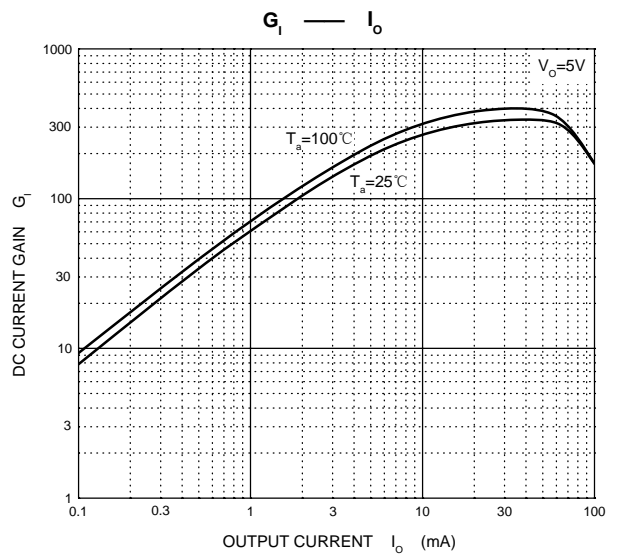
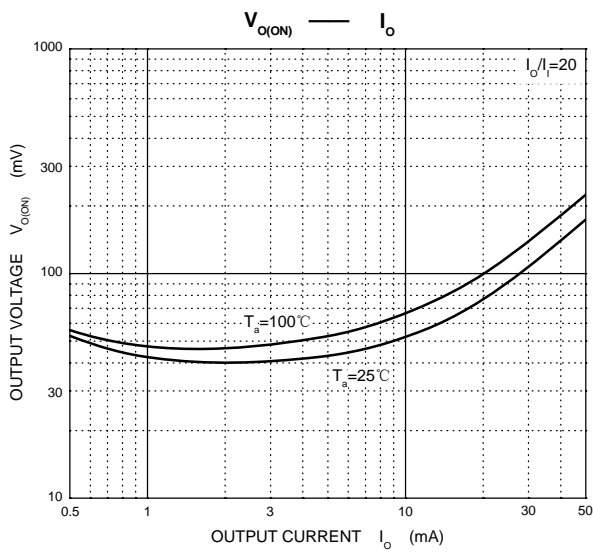
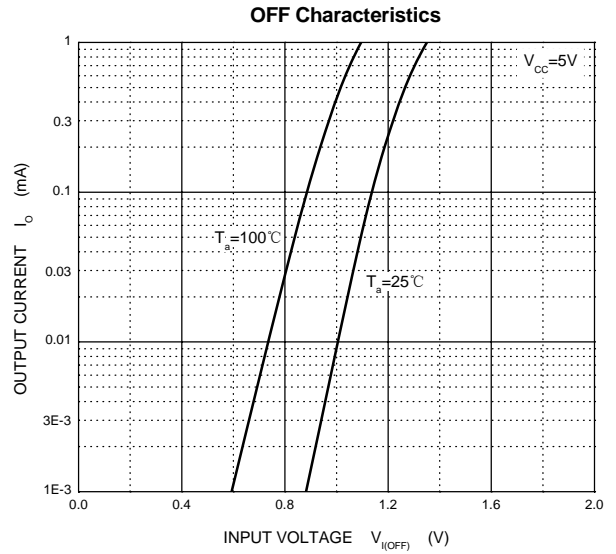
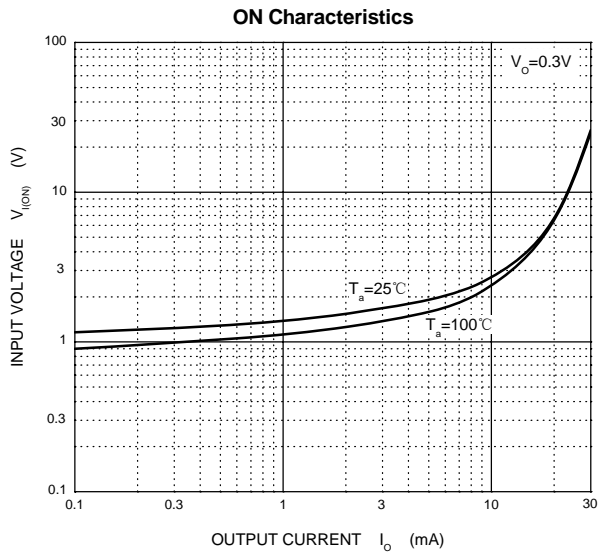
Electrical characteristics (T_a=25°C)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	V _{I(off)}	-0.3			V	V _{CC} =-5V, I _O =-100μA
	V _{I(on)}			-1.4		V _O =-0.3V, I _O =-1mA
Output voltage	V _{O(on)}			-0.3	V	I _O /I _I =-5mA/-0.25mA
Input current	I _I			-0.88	mA	V _I =-5V
Output current	I _{O(off)}			-0.5	μA	V _{CC} =-50V, V _I =0
DC current gain	G _I	68				V _O =-5V, I _O =-5mA
Input resistance	R ₁	7	10	13	KΩ	
Resistance ratio	R ₂ /R ₁	3.7	4.7	5.7		
Transition frequency	f _T		250		MHz	V _{CE} =-10V, I _E =5mA, f=100MHz



Typical Characteristics

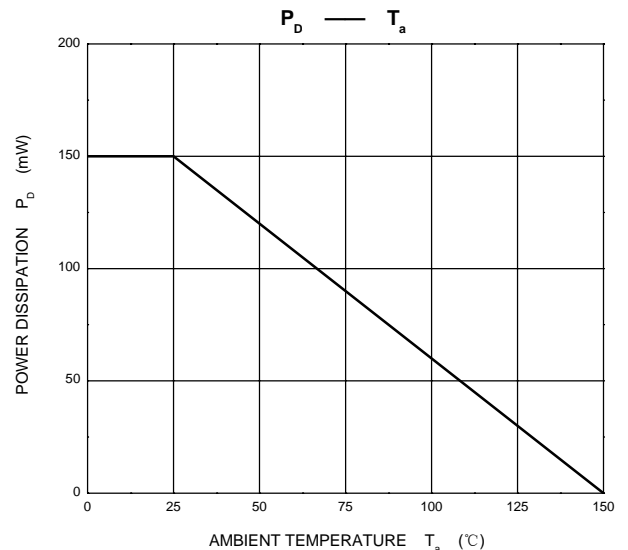
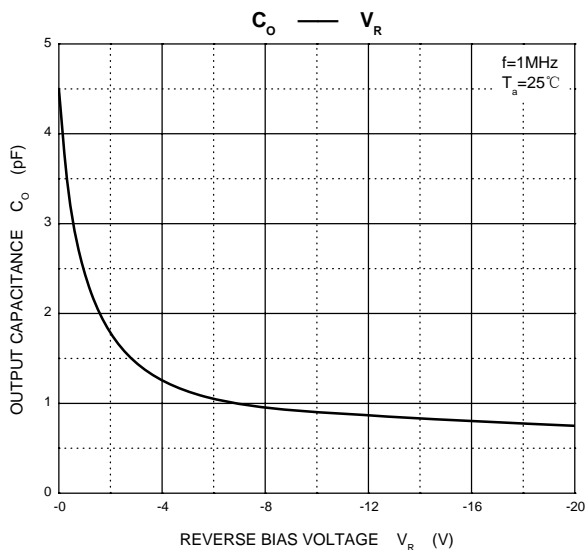
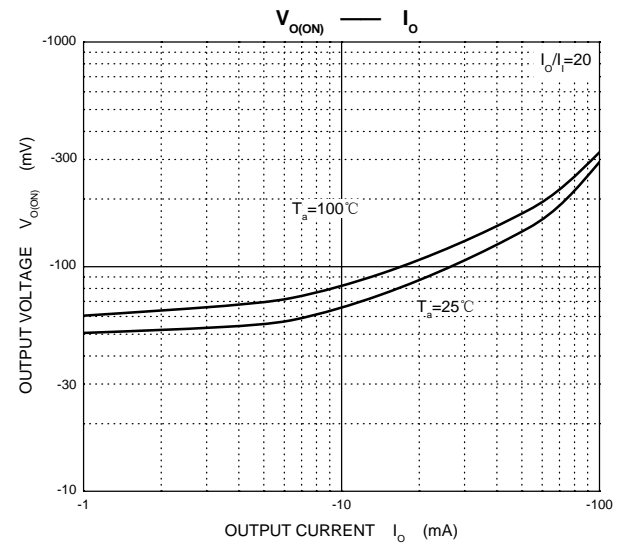
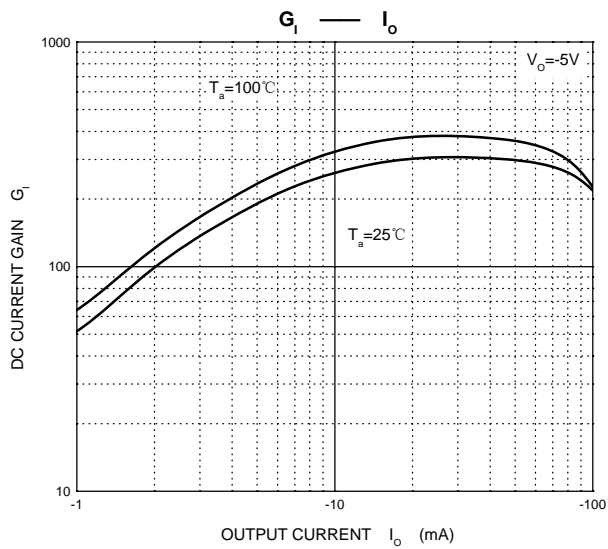
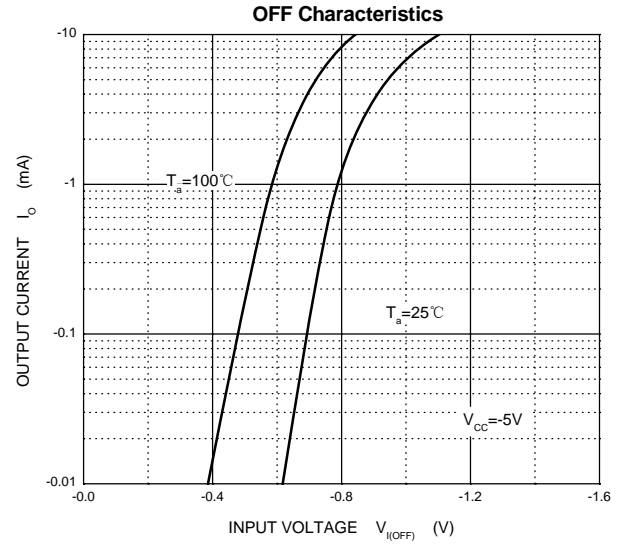
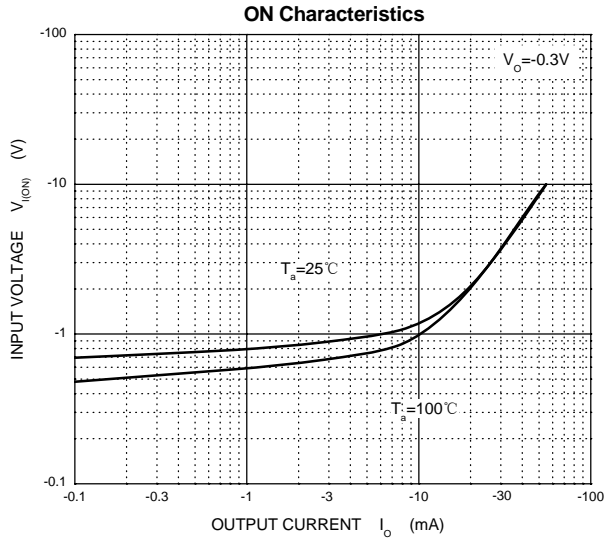
DTC144E(NPN)





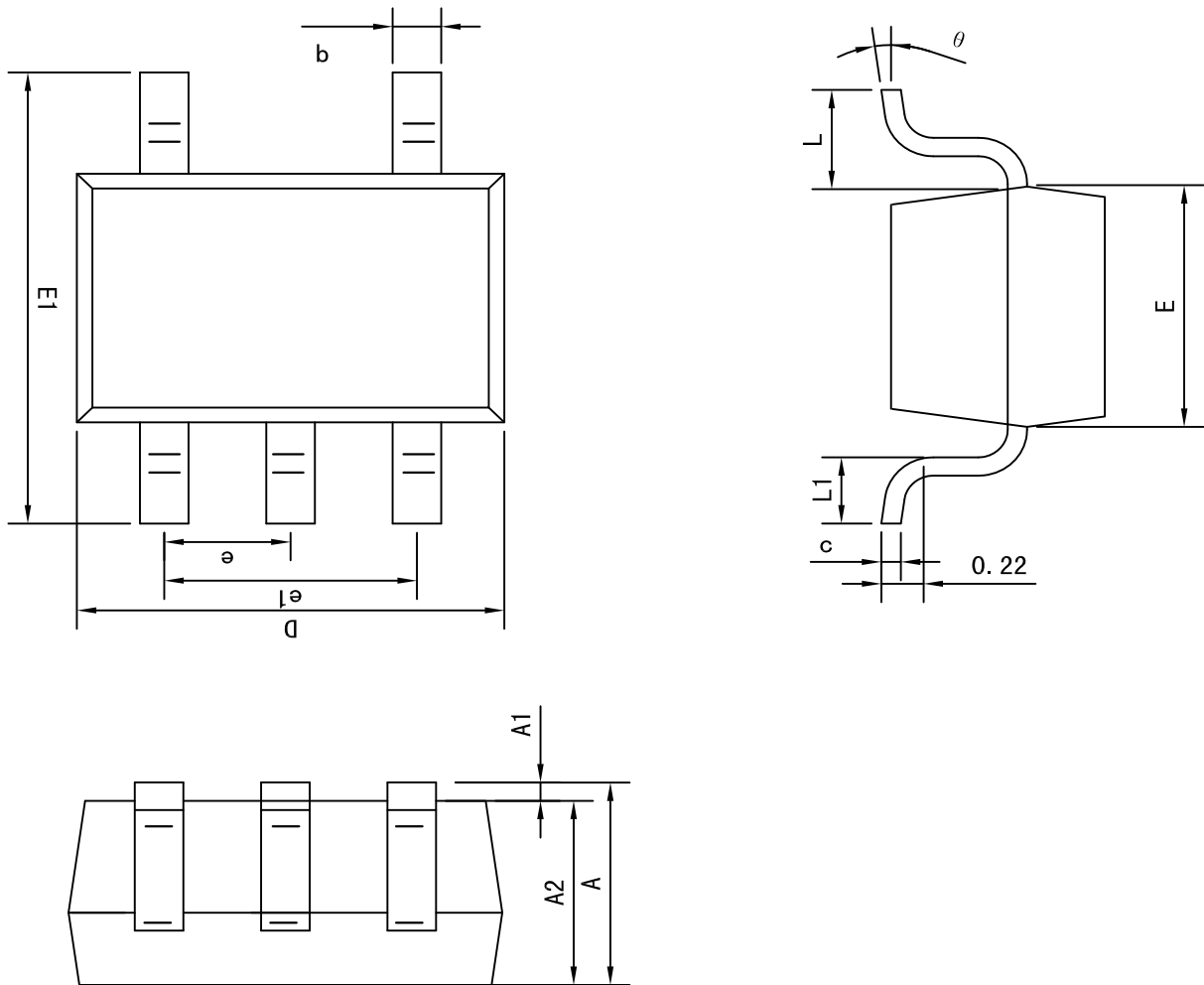
Typical Characteristics

DTA114Y(PNP)





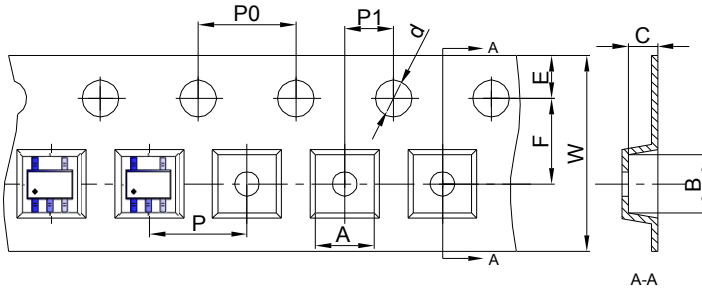
SOT-353 Package outline dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°



SOT-353 Embossed Carrier Tape



Packaging Description:
 SOT-353 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-353	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-353 Tape Leader and Trailer

