

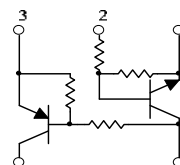


UMC4N Dual Digital Transistors (NPN+PNP)

FEATURES

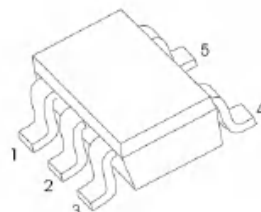
- DTC144E and DTA114Y transistors are built-in a package

MARKING: C4



NPN DTC144E Absolute maximum ratings ($T_a=25^{\circ}\text{C}$)

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	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55~150	$^{\circ}\text{C}$



SOT-353

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

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	0.5			V	$V_{CC}=5V, I_O=100\mu A$
	$V_{I(on)}$			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	K Ω	
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 ($T_a=25^{\circ}\text{C}$)

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	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

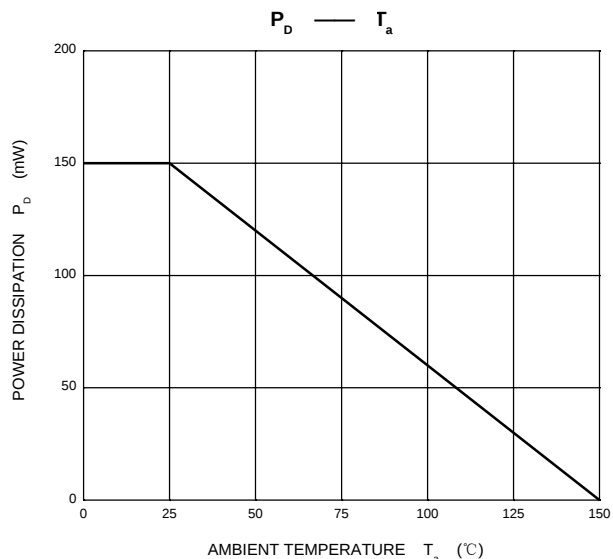
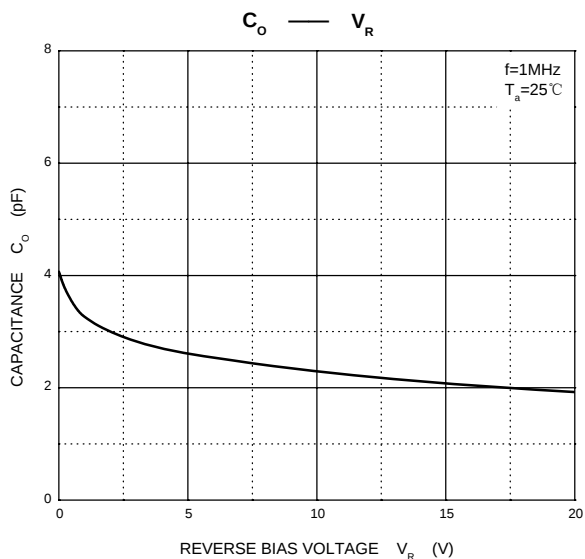
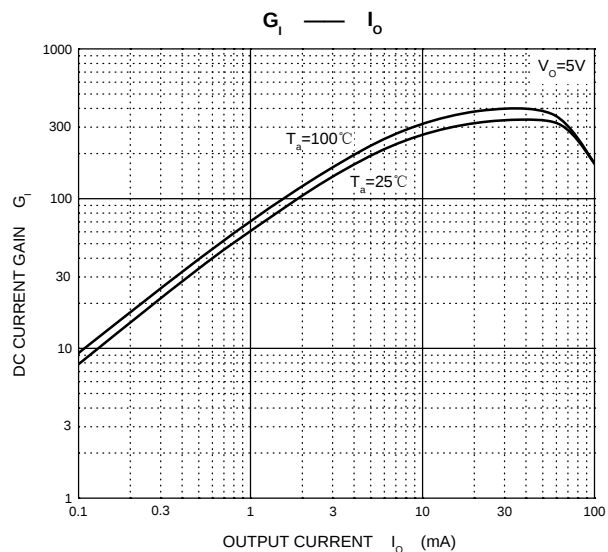
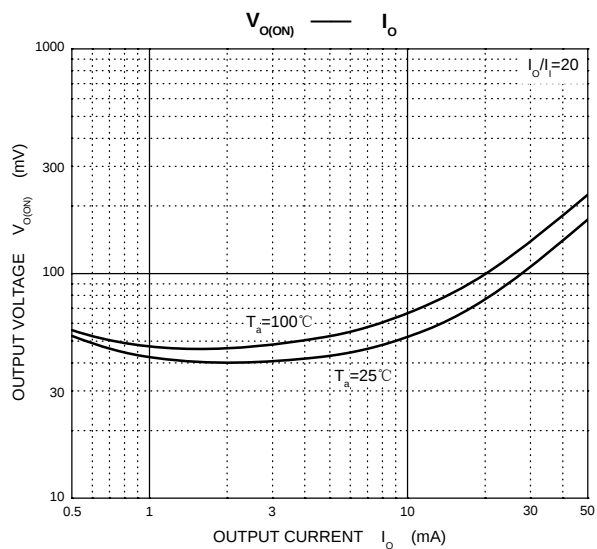
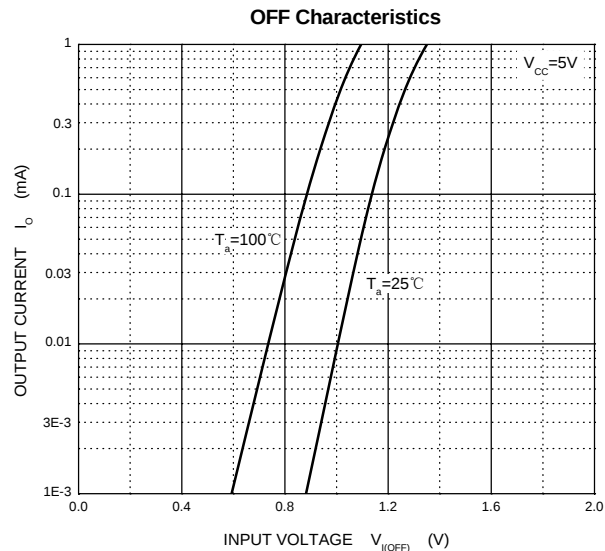
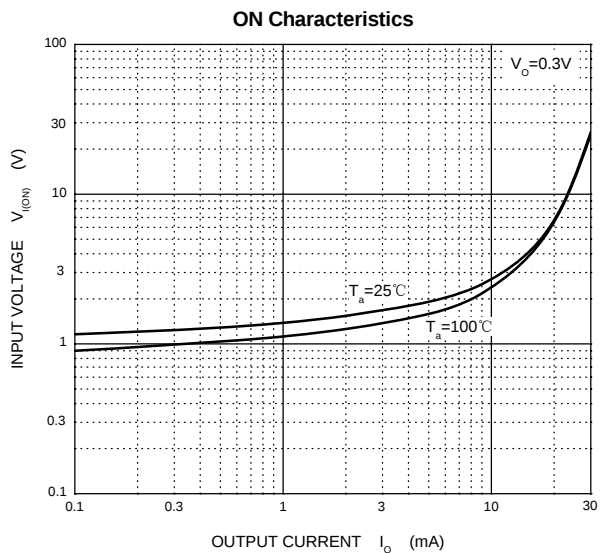
Electrical characteristics ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	-0.3			V	$V_{CC}=-5V, I_O=-100\mu A$
	$V_{I(on)}$			-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	K Ω	
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

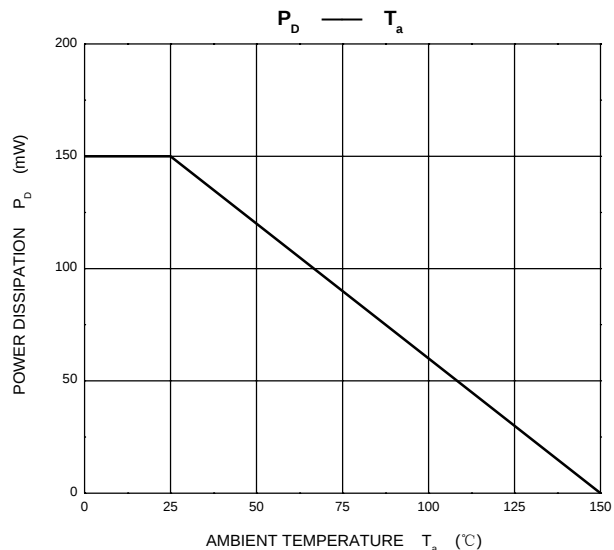
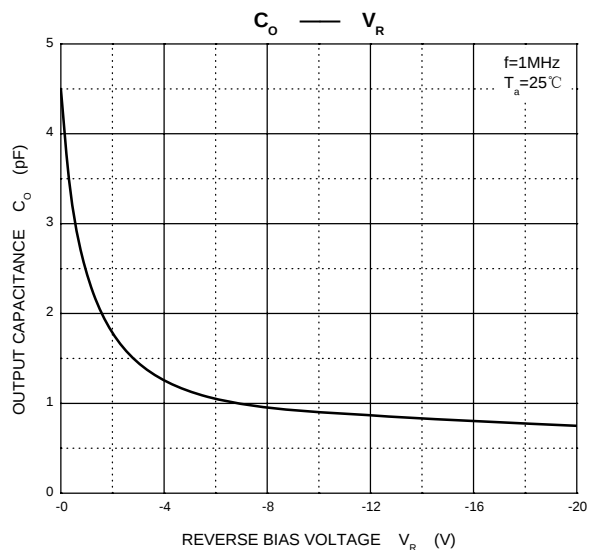
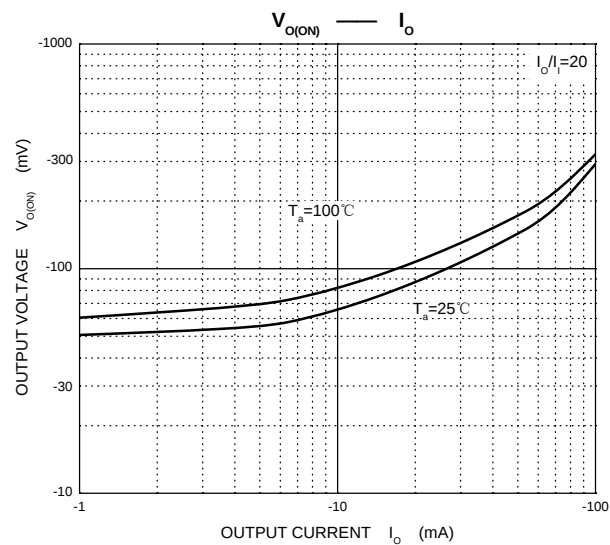
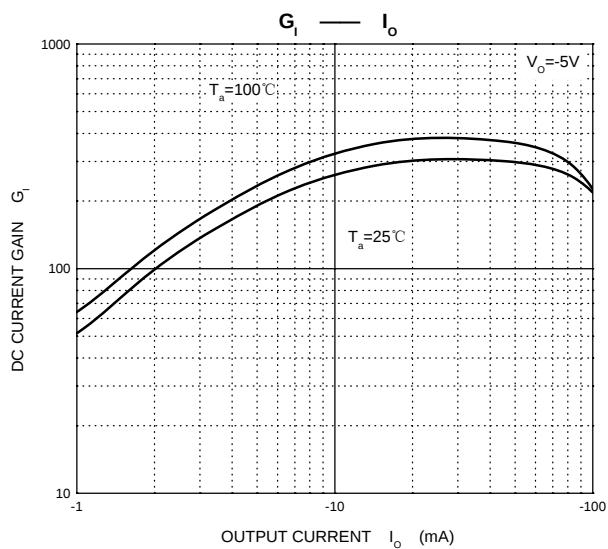
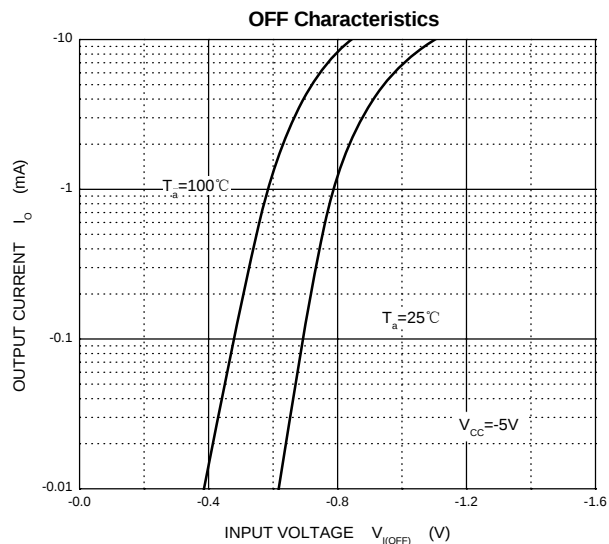
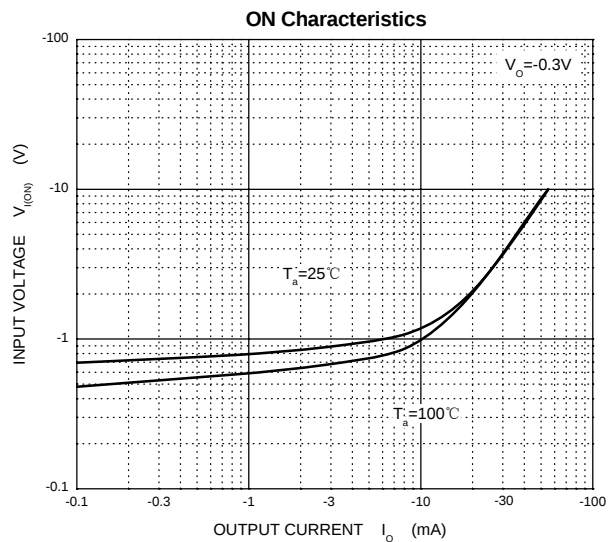
DTC144E(NPN)





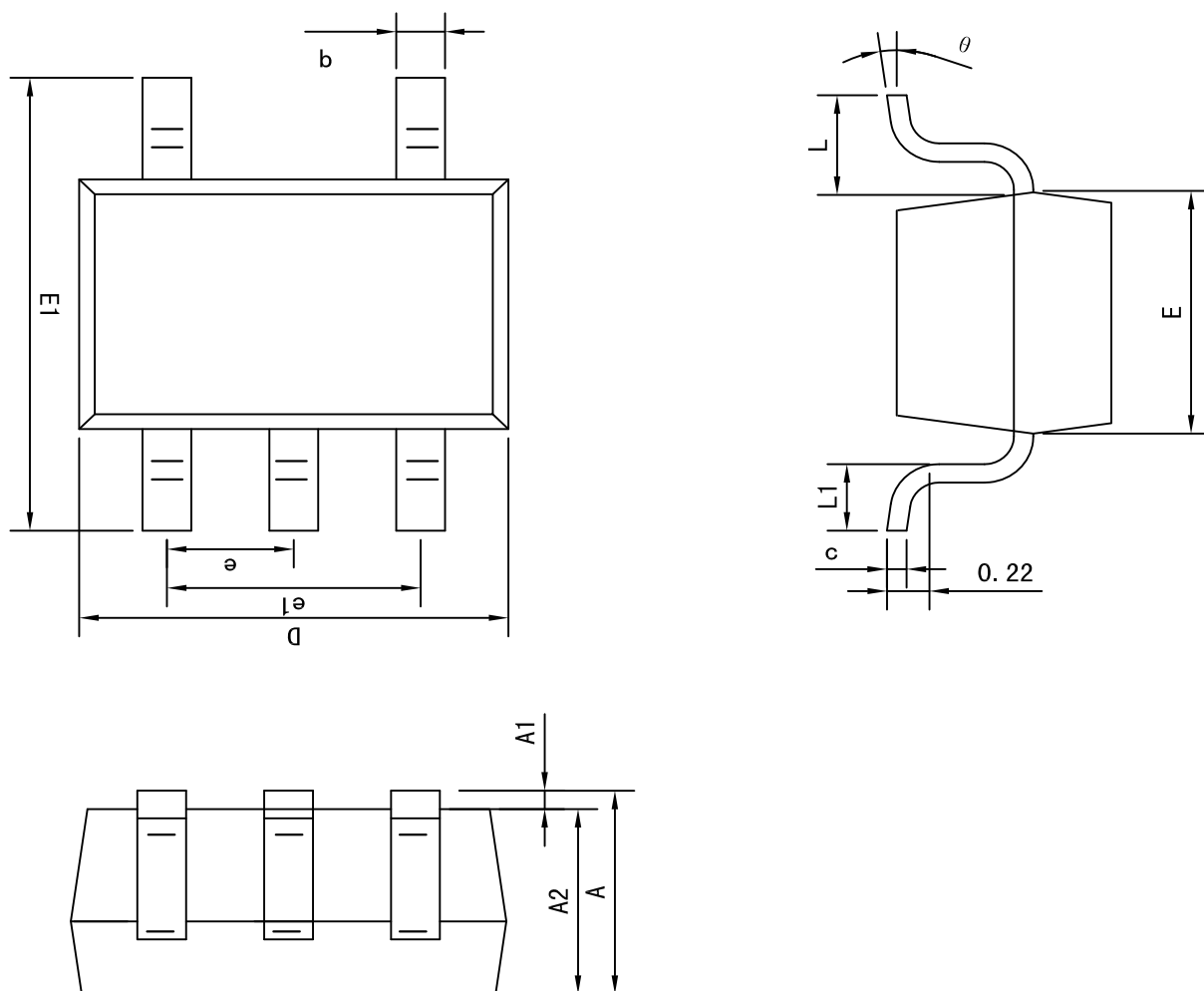
Typical Characteristics

DTA114Y(PNP)





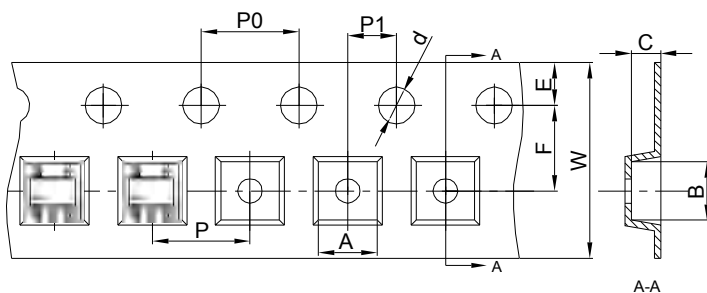
SOT-353 Package outline dimensions



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

