

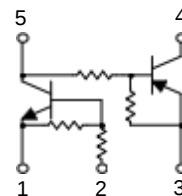
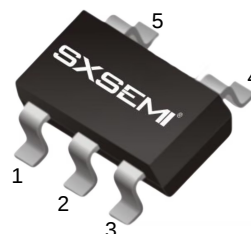
FEATURES

- I DTC144E and DTA114Y transistors are built-in a package

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
Operation Junction and Storage Temperature Range	T _J , T _{stg}	-55~+150	°C

SOT-353



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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 _I	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
Operation Junction and Storage Temperature Range	T _J , T _{stg}	-55~+150	°C

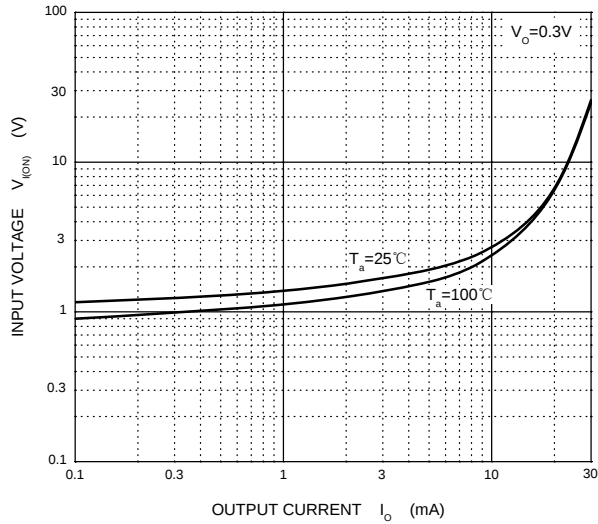
Electrical characteristics (T_a=25°C)

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 _I	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

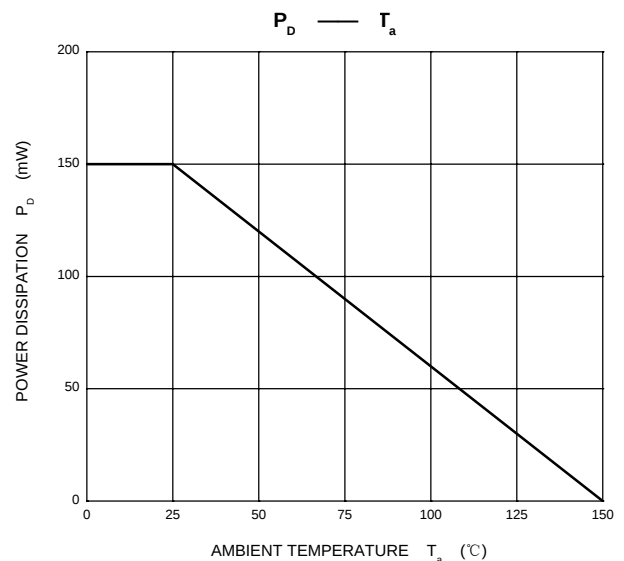
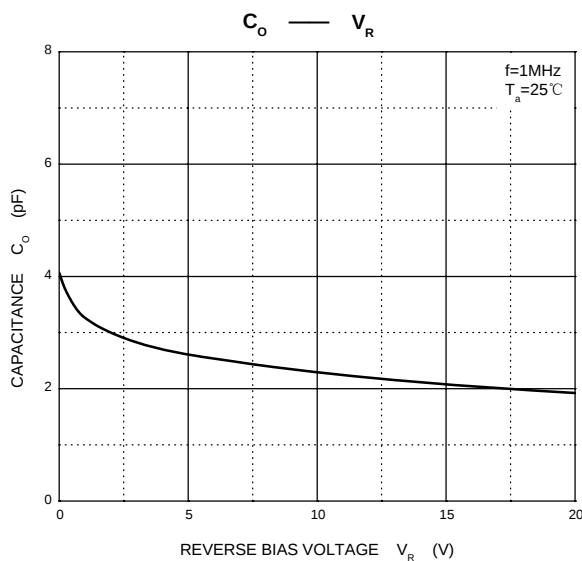
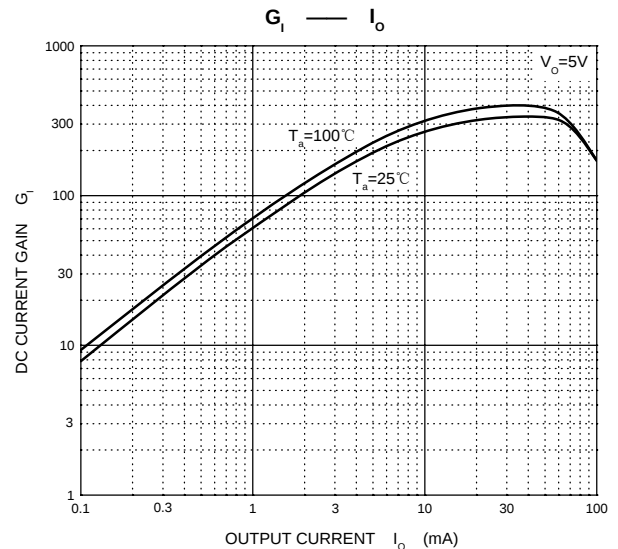
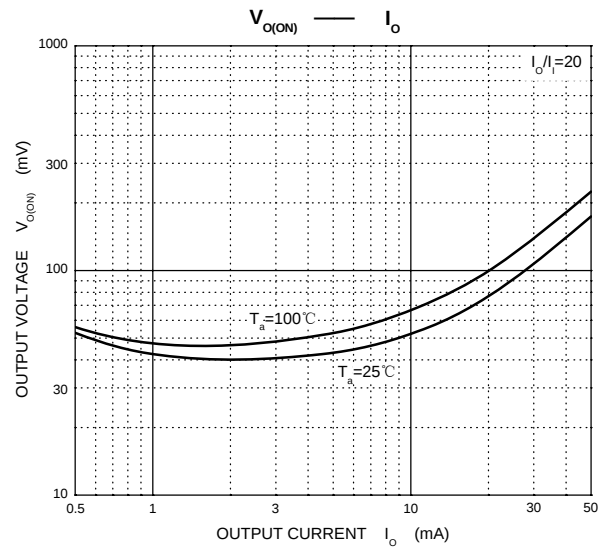
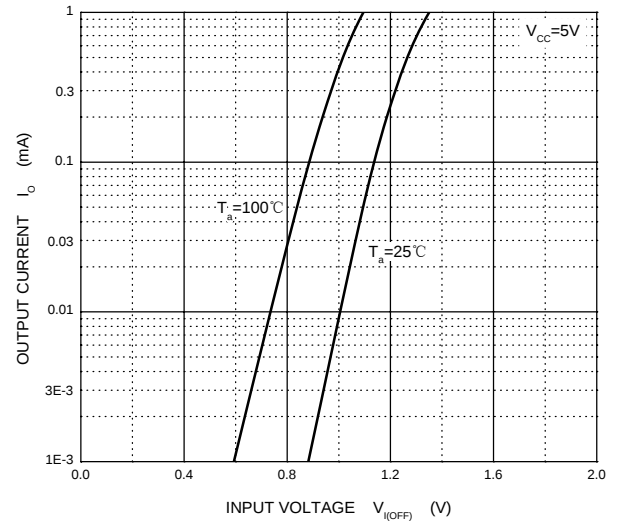
Typical Characteristics

DTC144E(NPN)

ON Characteristics

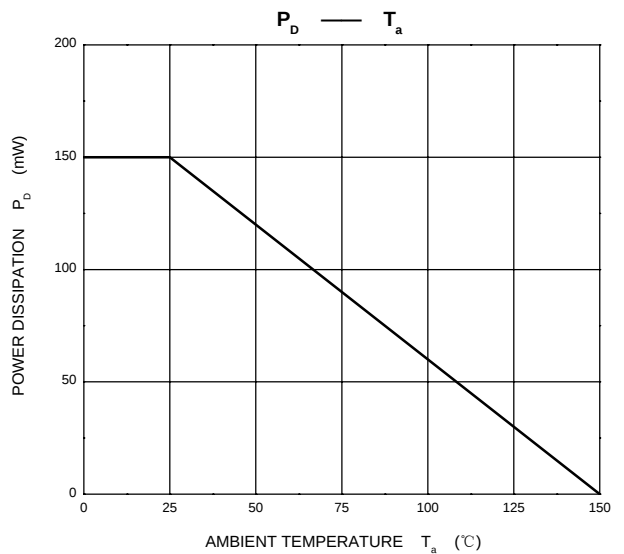
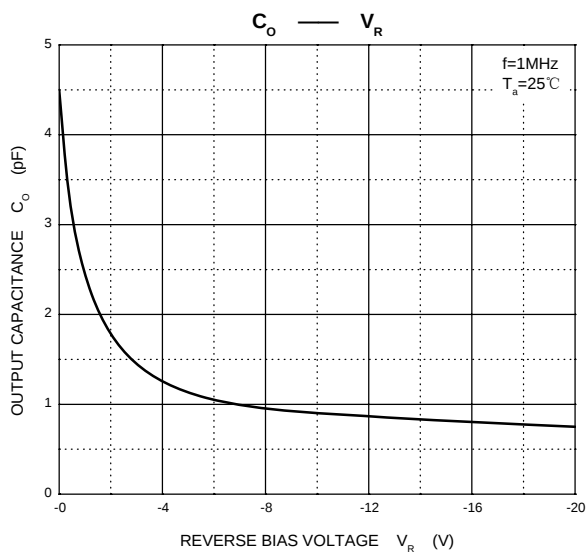
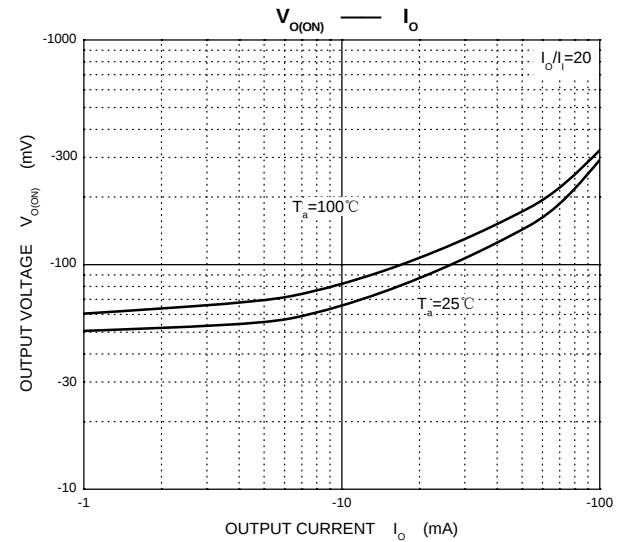
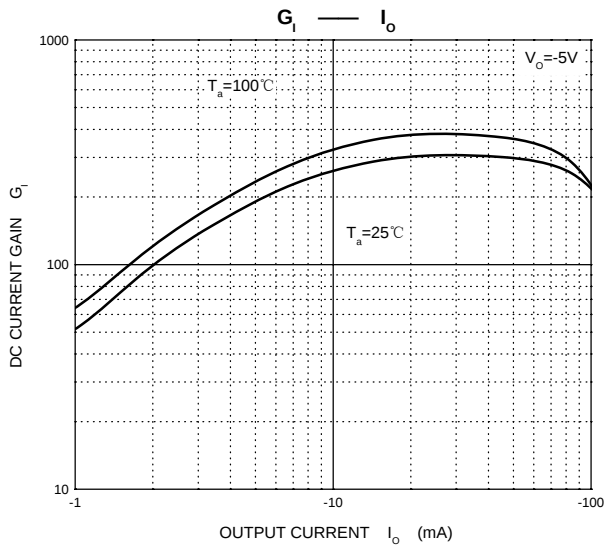
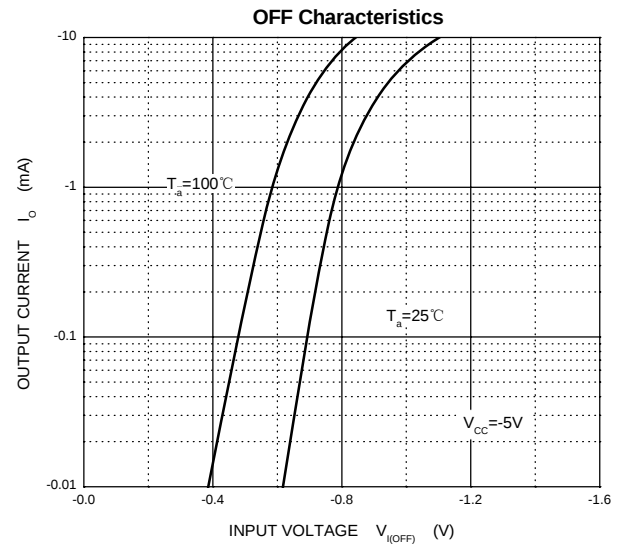
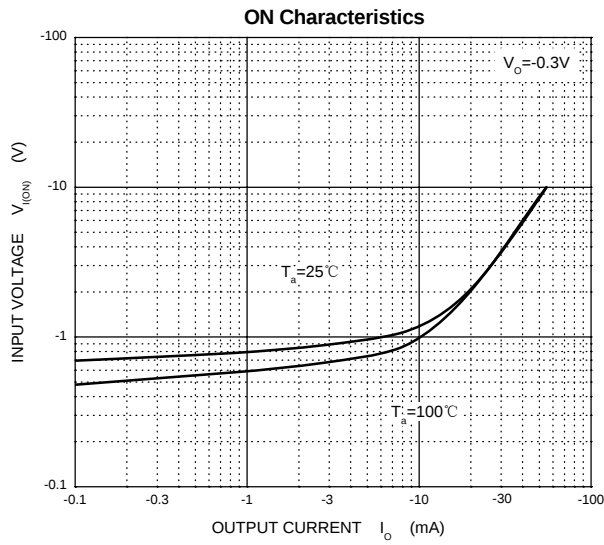


OFF Characteristics

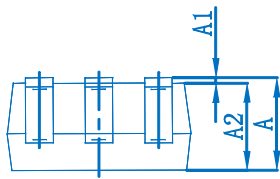
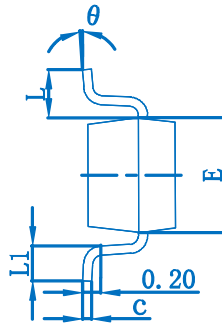
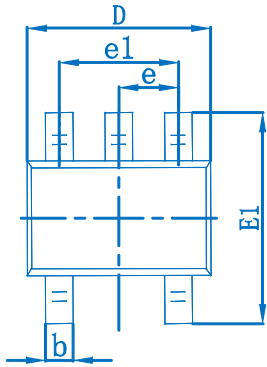


Typical Characteristics

DTA114Y(PNP)

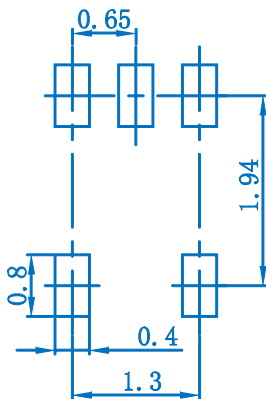


SOT-353 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

SOT-353 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.