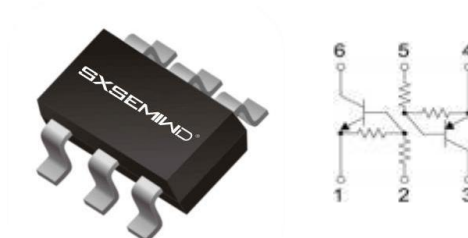


FEATURES

- Both the DTA143X chip and DTC144E chip in a package
- Mounting possible with SOT-363 automatic mounting machines
- Transistor elements are independent, eliminating interference
- Mounting cost and area be cut in half

SOT-363



Marking: D5

DTr1

Absolute maximum ratings(Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	50	V
Input voltage	V _{IN}	-10~+40	V
Output current	I _o	30	mA
	I _{C(MAX)}	100	
Power dissipation	P _d	150	mW
Operation Junction and Storage Temperature Range	T _J , T _{stg}	-55~+150	°C

Electrical characteristics (Ta=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		61.1	KΩ	
Resistance ratio	R ₂ /R ₁	0.8	1	1.2		
Transition frequency	f _T		250		MHz	V _O =10V ,I _o =5mA,f=100MHz

DTr2
Absolute maximum ratings(Ta=25℃)

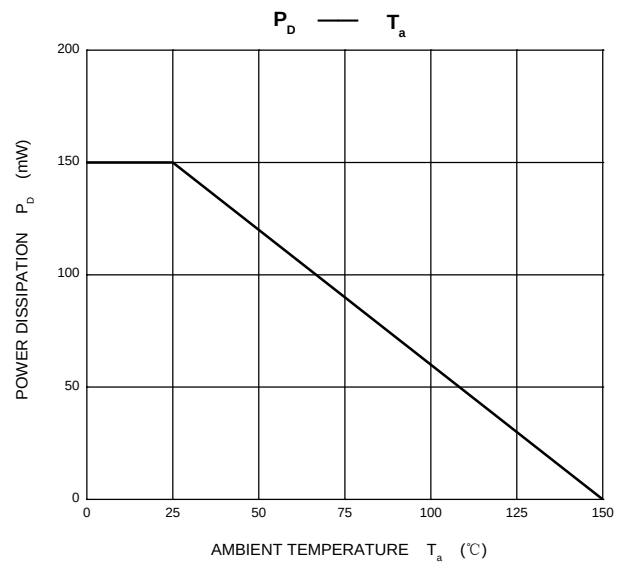
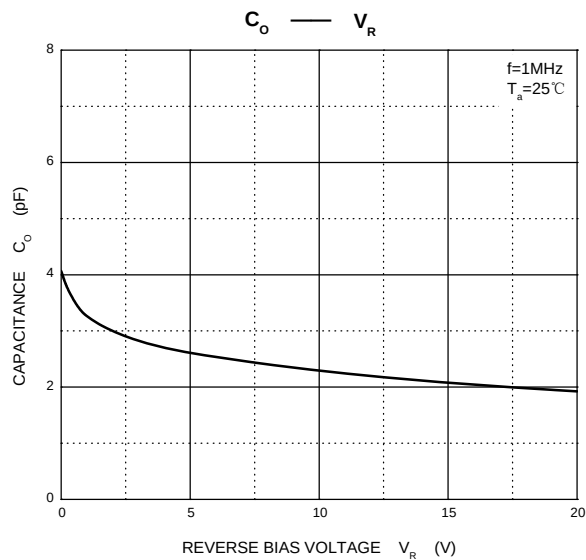
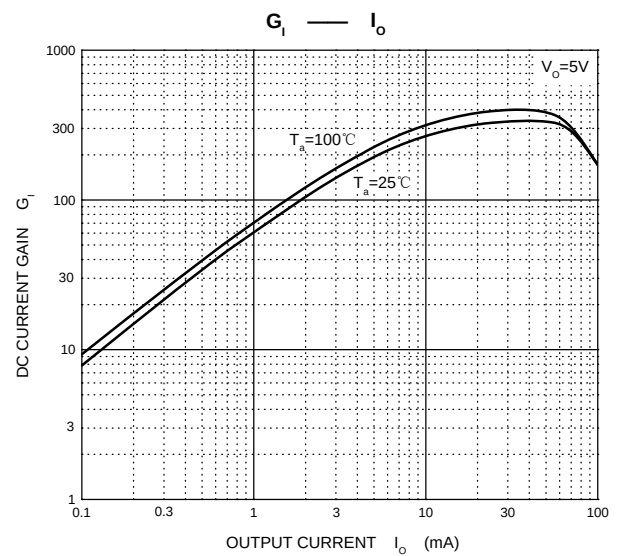
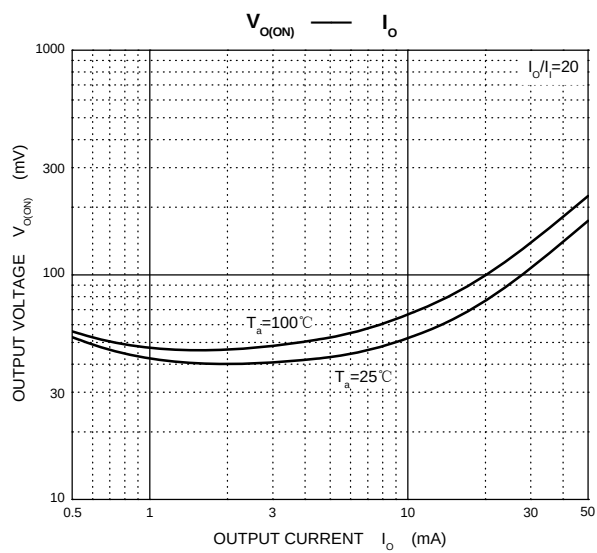
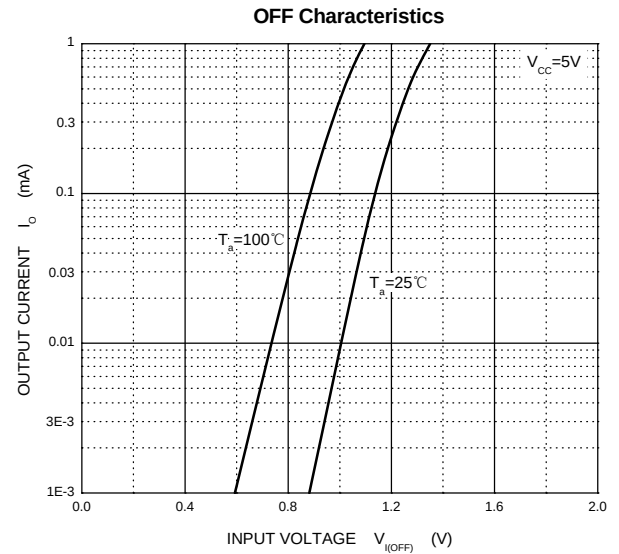
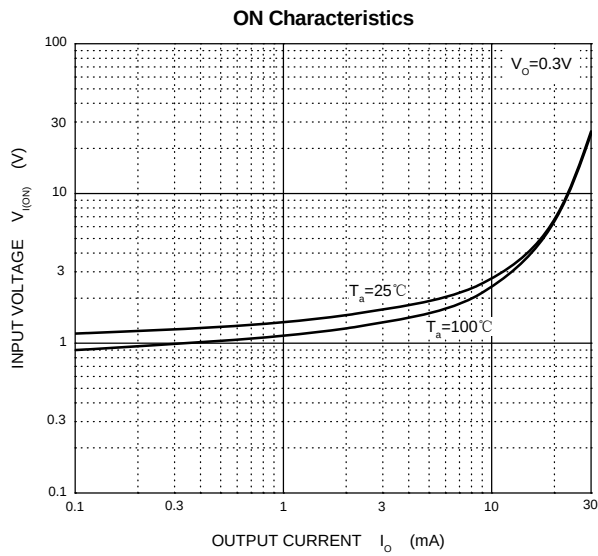
Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	-50	V
Input voltage	V_{IN}	-20~+7	V
Output current	I_o	-100	mA
	$I_{C(MAX)}$	-100	
Power dissipation	P_d	150	mW
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	℃

Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	-0.3			V	$V_{CC}=-5V, I_o=-100\mu A$
	$V_{I(on)}$			-2.5		$V_o=-0.3V, I_o=-20mA$
Output voltage	$V_{O(on)}$			-0.3	V	$I_o/I_i=-10mA/-0.5mA$
Input current	I_i			-1.8	mA	$V_i=-5V$
Output current	$I_{O(off)}$			-0.5	μA	$V_{CC}=-50V, V_i=0$
DC current gain	G_I	30				$V_o=-5V, I_o=-10mA$
Input resistance	R_1	3.29		6.11	K Ω	
Resistance ratio	R_2/R_1	1.7		2.6		
Transition frequency	f_T		250		MHz	$V_o=-10V, I_o=-5mA, f=100MHz$

Typical Characteristics

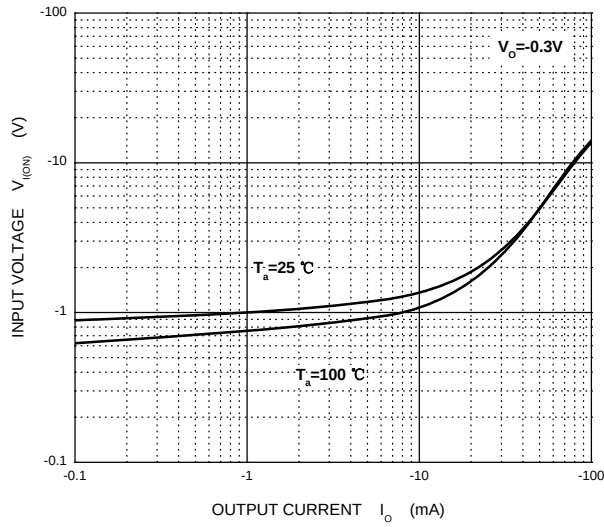
DTC144E



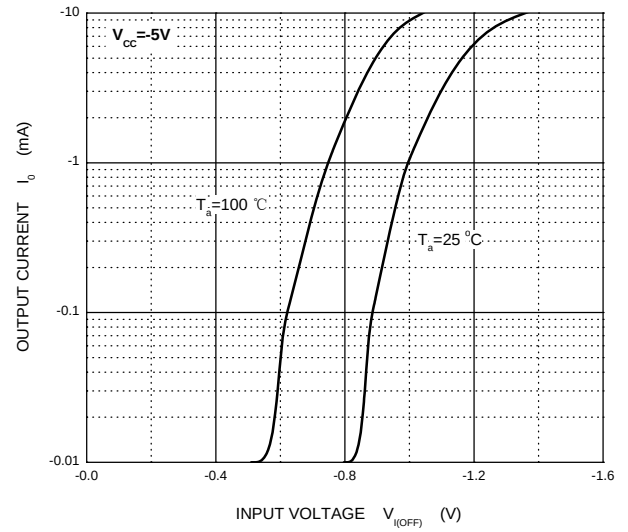
Typical Characteristics

DTA143X

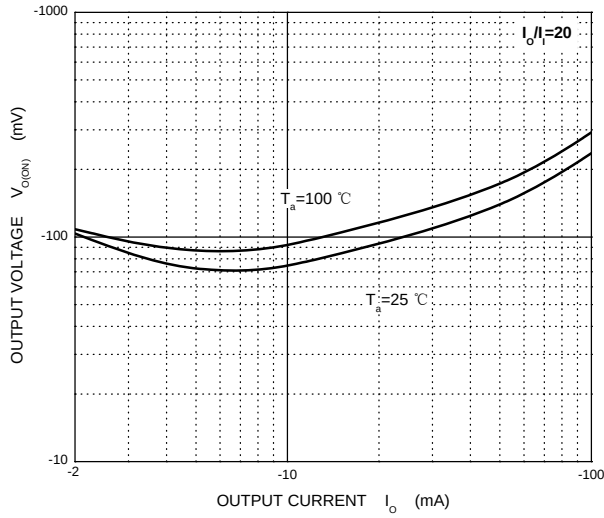
ON Characteristics



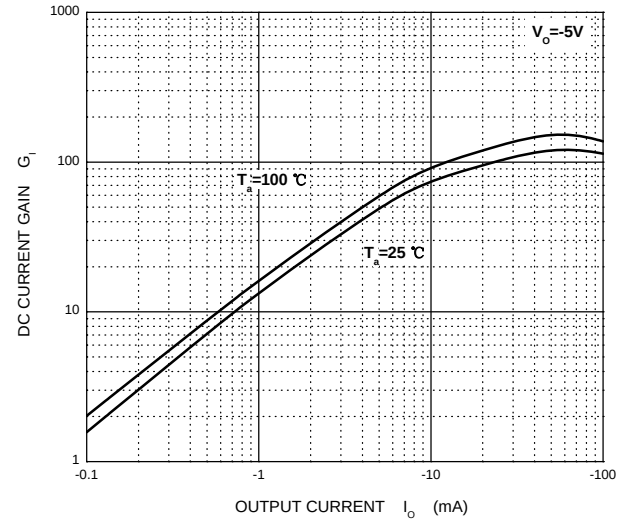
OFF Characteristics



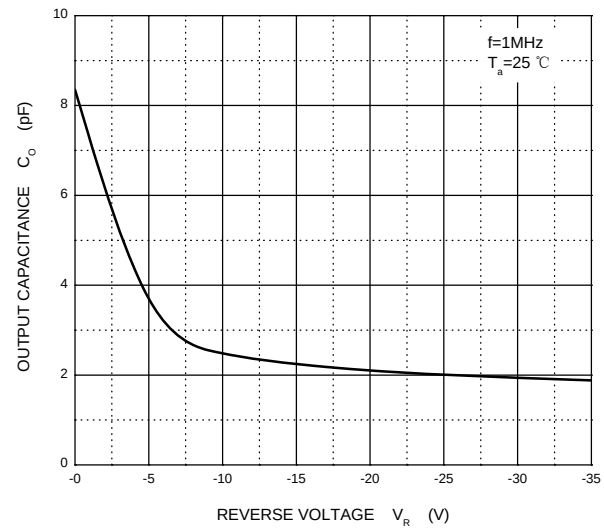
$V_{o(ON)}$ — I_o



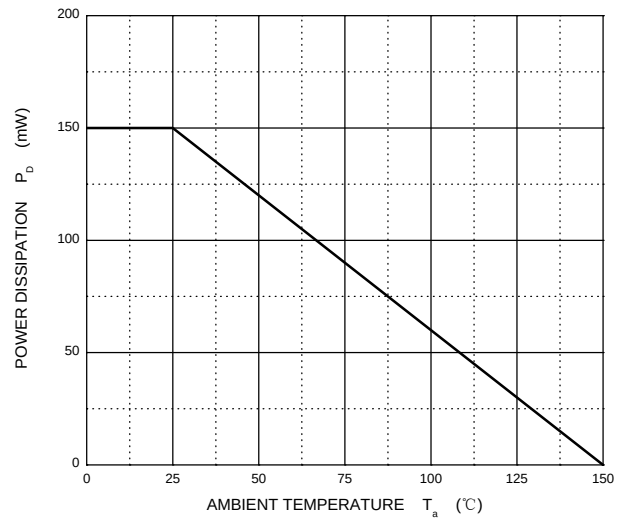
G_i — I_o



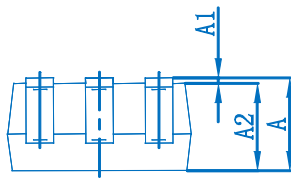
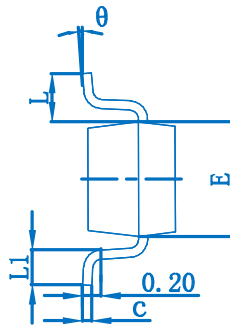
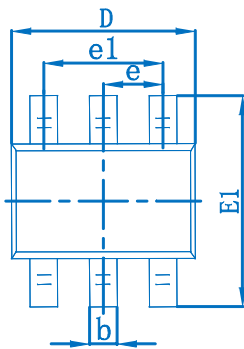
C_o — V_R



P_D — T_a

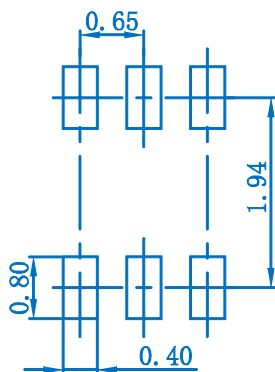


SOT-363 Package Outline Dimensions



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
θ	0°	8°	0°	8°

SOT-363 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.