

Features

- DTC124E and DTA124E in SOT-363 package
- Reduces board space
- Reduces component count
- Surface mount package suited for automated

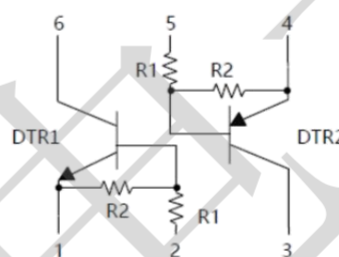
Ordering Information

- Shipping Qty:3000/7inch Tape& Reel

SOT363



Equivalent circuit



Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value		Unit
		DTR1	DTR2	
Supply Voltage	V _{CC}	50	-50	V
Input Voltage	V _{IN}	-10 to +40	-40 to +10	V
Output Current	I _O	30	-30	mA
Collector Current	I _{C(Max.)}	100	-100	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	150	mW
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics-DTR1 (TA=25°C unless otherwise specified)

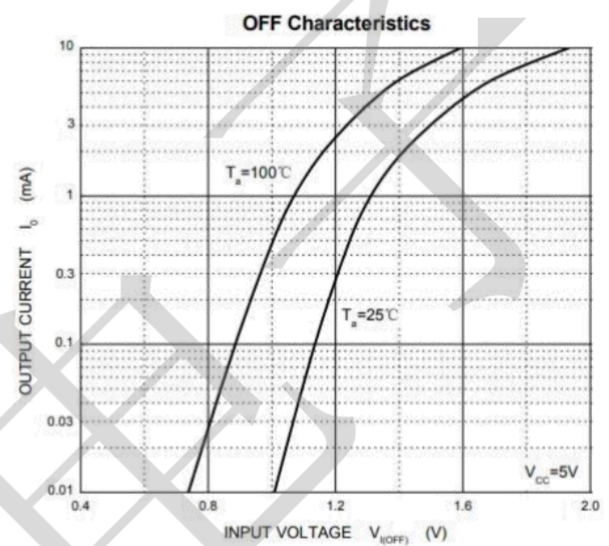
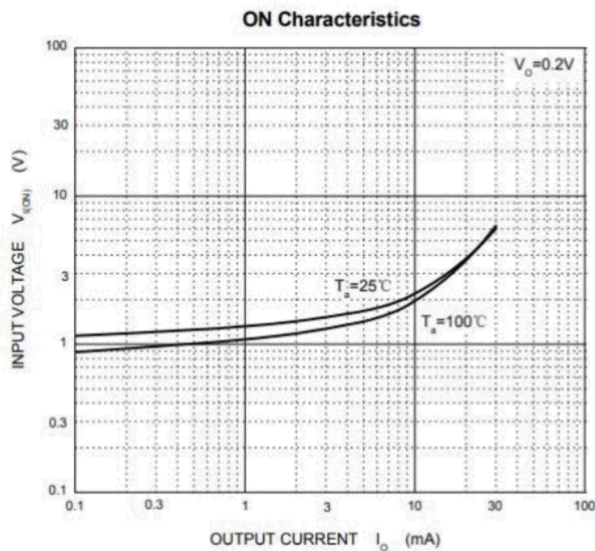
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Input Voltage	V _{I(off)}	0.5	--	--	V	V _{CC} = 5V, I _O = 100μA
	V _{I(on)}	--	--	3	V	V _O = 0.2V, I _O = 5mA
Output Voltage	V _{O(on)}	--	--	0.3	V	I _O = 10mA, I _I = 0.5mA
Input Current	I _I	--	--	360	uA	I _I = 5V
Output Current	I _{O(off)}	--	--	500	nA	V _{CC} = 50V, V _I = 0V
DC Current Gain	G _I	56	--	--	--	V _O = 5V, I _O = 5mA
Input Resistor	R ₁	15.4	22	28.6	KΩ	
Resistance ratio	R ₂ /R ₁	0.8	1	1.2	--	
Gain-Bandwidth Product	f _T	--	250	--	MHz	V _{CE} = 10V, I _E = -5mA, f = 100MHz

Electrical Characteristics-DTR2 (TA=25°C unless otherwise specified)

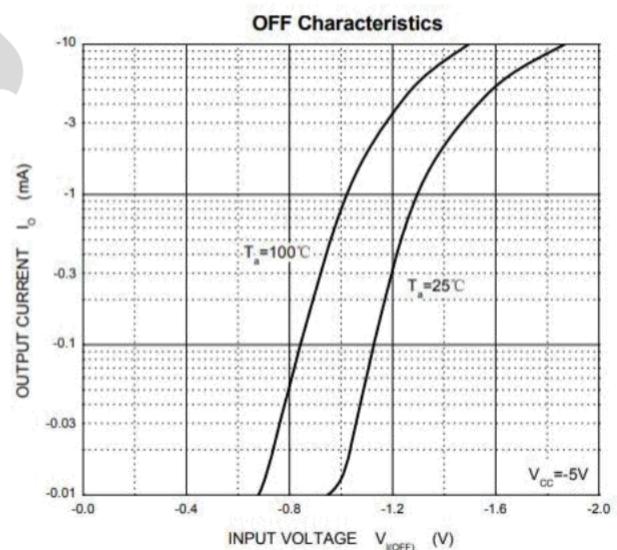
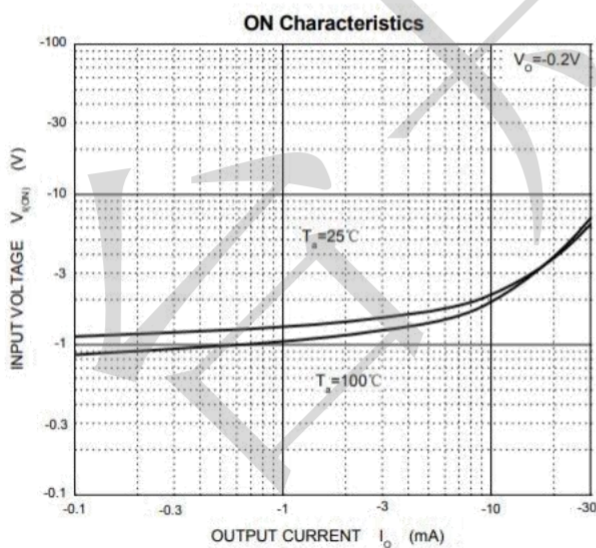
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Input Voltage	V _{I(off)}	-0.5	--	--	V	V _{CC} = -5V, I _O = -100μA
	V _{I(on)}	--	--	-3	V	V _O = -0.2V, I _O = -5mA
Output Voltage	V _{O(on)}	--	--	-0.3	V	I _O = -10mA, I _I = -0.5mA
Input Current	I _I	--	--	-360	uA	I _I = -5V
Output Current	I _{O(off)}	--	--	-500	nA	V _{CC} = -50V, V _I = 0V
DC Current Gain	G _I	56	--	--	--	V _O = -5V, I _O = -5mA
Input Resistor	R ₁	15.4	22	28.6	KΩ	
Resistance ratio	R ₂ /R ₁	0.8	1	1.2	--	
Gain-Bandwidth Product	f _T	--	250	--	MHz	V _{CE} = 10V, I _E = -5mA, f = 100MHz

Typical Performance Characteristics(TA=25°C unless otherwise Specified)

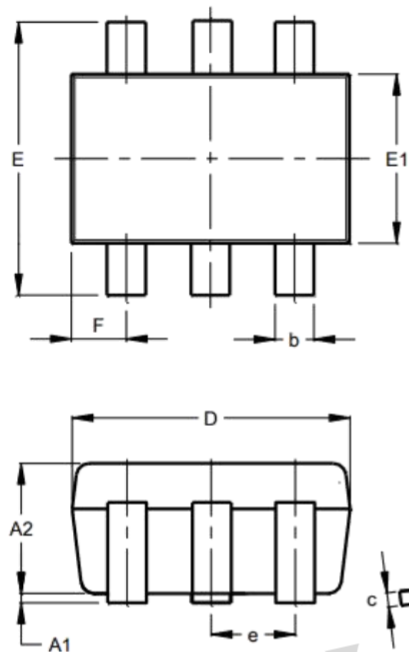
DTR1-NPN:



DTR2-PNP:

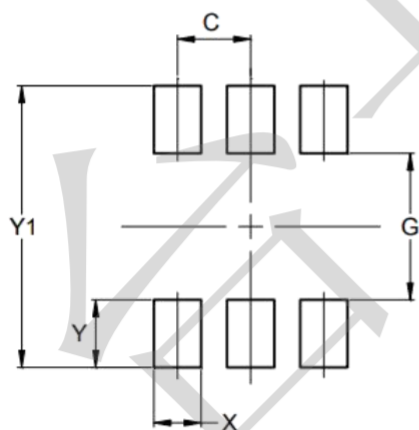


Package Outline Dimensions (Unit: mm)



SOT363			
Dim	Min	Max	Typ
A1	0.00	0.10	0.05
A2	0.90	1.00	1.00
b	0.10	0.30	0.25
c	0.10	0.22	0.11
D	1.80	2.20	2.15
E	2.00	2.20	2.10
E1	1.15	1.35	1.30
e	0.650 BSC		
F	0.40	0.45	0.425
L	0.25	0.40	0.30
a	0°	8°	—
All Dimensions in mm			

Mounting Pad Layout (Unit: mm)



Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.420
Y	0.600
Y1	2.500