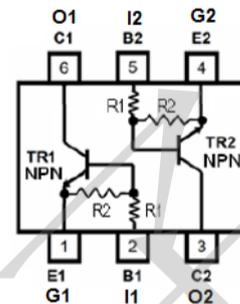


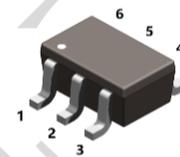
## Features

- Two DTC114E transistors are built-in a package
- Epitaxial planar die construction
- Built-in biasing resistors (R1: 10kΩ, R2: 10kΩ)
- Also available in lead free version



## Mechanical Data

- Case: SOT-363
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderable  
MIL-STD-202, Method 208



**SOT-363**

## Ordering Information

Part Number	Package	Shipping Quantity
DDC114EU	SOT-363	3000 pcs / Tape & Reel

**Maximum Ratings** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Value		Unit
		TR1	TR2	
Supply Voltage	$V_{CC}$	50	50	V
Input Voltage	$V_{IN}$	-10 to +40	-10 to +40	V
Output Current	$I_o$	50	50	mA
Collector Current	$I_{C(Max)}$	100	100	mA

**Thermal Characteristics**

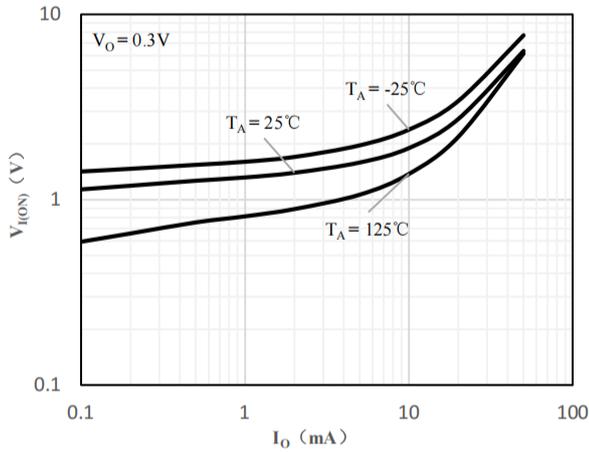
Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	150	mW
Operating Junction Temperature Range	$T_J$	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

## Electrical Characteristics-TR1 and TR2

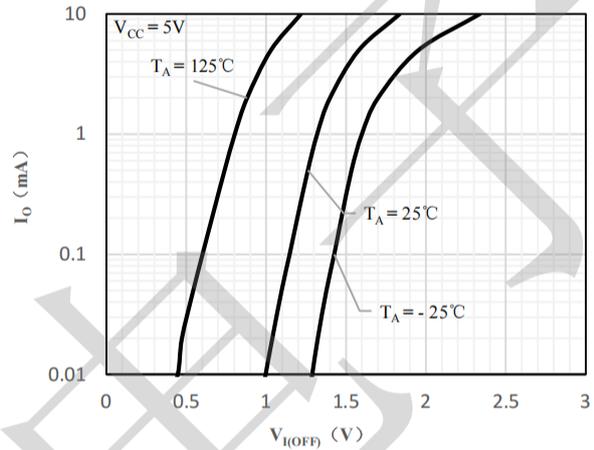
(@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Condition	Min .	Typ.	Max	Unit
Input Voltage	$V_{I(\text{off})}$	$V_{CC} = 5\text{V}, I_o = 100\mu\text{A}$	0.5	-	-	V
	$V_{I(\text{on})}$	$V_O = 0.3\text{V}, I_o = 10\text{mA}$	-	-	3	V
Output Voltage	$V_{O(\text{on})}$	$I_o = 10\text{mA}, I_i = 0.5\text{mA}$	-	0.1	0.3	V
Input Current	$I_i$	$V_i = 5\text{V}$	-	-	0.88	mA
Output Current	$I_{O(\text{off})}$	$V_{CC} = 50\text{V}, V_i = 0\text{V}$	-	-	0.5	$\mu\text{A}$
DC Current Gain	$G_i$	$V_O = 5\text{V}, I_o = 5\text{mA}$	30	-	-	-
Input Resistor	$R_1$		7	10	13	k $\Omega$
Resistance Ratio	$R_2/R_1$		0.8	1	1.2	
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_E = 5\text{mA},$ $f = 100\text{MHz}$	-	250	-	MHz

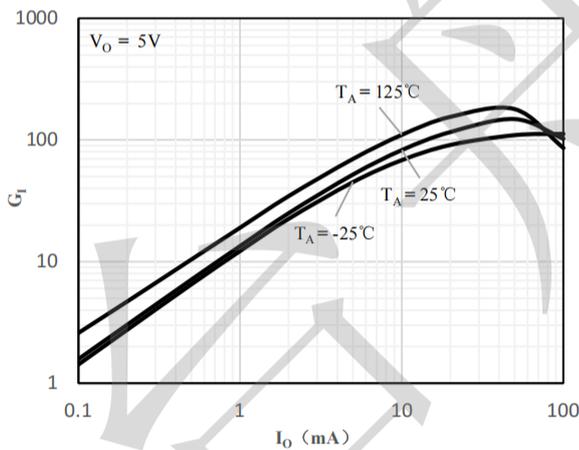
**Ratings and Characteristic Curves (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)**



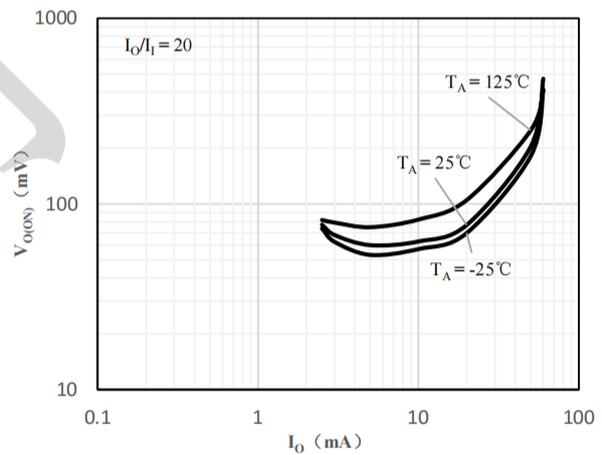
**Fig 1 Input Voltage vs Output Current**



**Fig 2 Output Current vs Input Voltage**



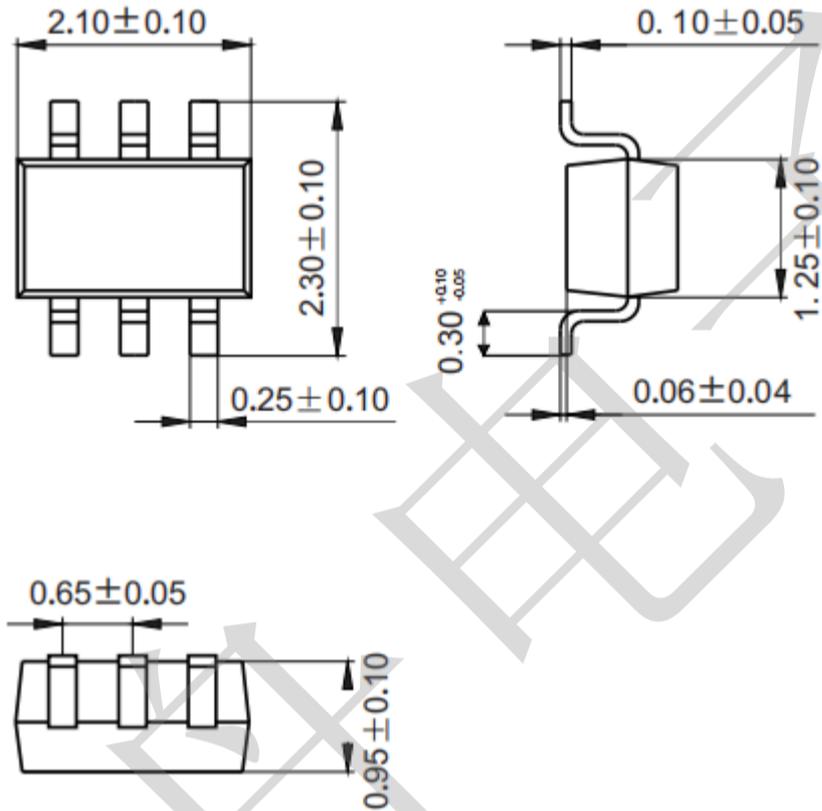
**Fig 3 DC Current Gain vs Output Current**



**Fig 4 Output Voltage vs Output Current**

Package Outline Dimensions (unit:mm)

SOT-363



Mounting Pad Layout (unit: mm)

