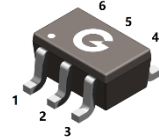
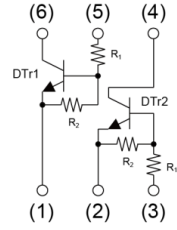


Features

- Two DTC124E transistors are built-in a package
- Built-in biasing resistors (R_1 : 22k Ω , R_2 : 22k Ω)
- Transistor elements are independent, eliminating interference
- Mounting cost and area can be cut in half
- RoHS compliant with Halogen-free

HF



SOT-363

Mechanical Data

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

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
UMH5N	SOT-363	3000 pcs / Tape & Reel	H5

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

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	50	V
V_I	Input Voltage	-10 to +40	V
I_O	Output Current	30	mA
$I_{C(Max)}$	Collector Current	100	mA
P_D	Power Dissipation	150	mW
T_J	Operating Junction Temperature Range	-55 ~ +150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 ~ +150	$^\circ\text{C}$

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ 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
Input Voltage	$V_{I(\text{ON})}$	$V_O = 0.2\text{V}, I_O = 5\text{mA}$	-	-	3	V
Output Voltage	$V_{O(\text{on})}$	$I_O = 10\text{mA}, I_I = 0.5\text{mA}$	-	-	0.3	V
Input Current	I_I	$V_I = 5\text{V}$	-	-	0.36	mA
Output Current	$I_{O(\text{off})}$	$V_{CC} = 50\text{V}, V_I = 0\text{V}$	-	-	0.5	μA
DC Current Gain	G_I	$V_O = 5\text{V}, I_O = 5\text{mA}$	56	-	-	-
Input Resistor	R_1		15.4	22	28.6	k Ω
Resistance ratio	R_2/R_1		0.8	1.0	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)

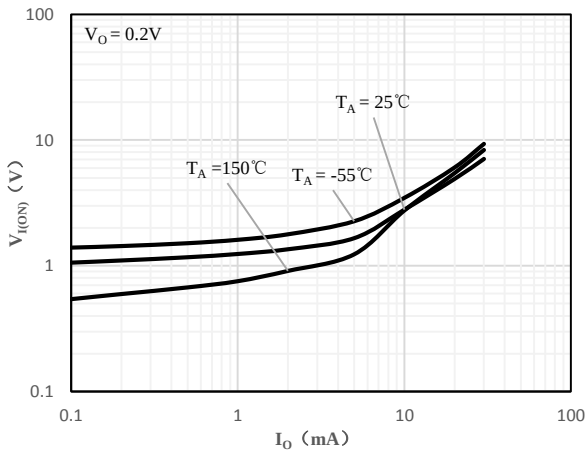


Fig 1 Input Voltage vs Output Current

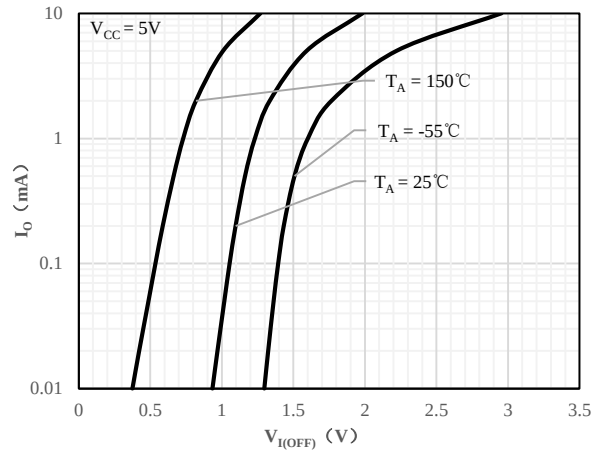


Fig 2 Output Current vs Input Voltage

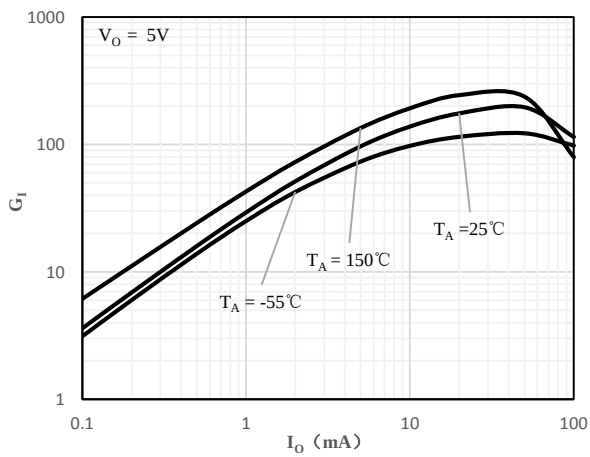


Fig 3 DC Current Gain vs Output Current

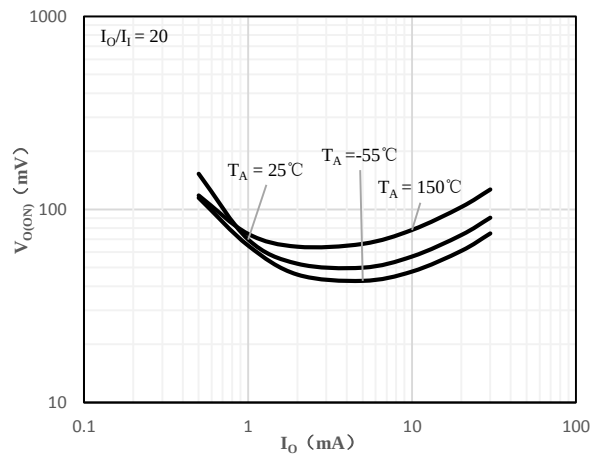


Fig 4 Output Voltage vs Output Current

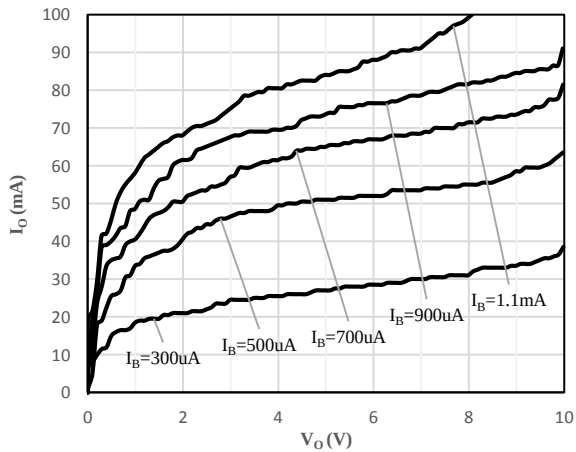
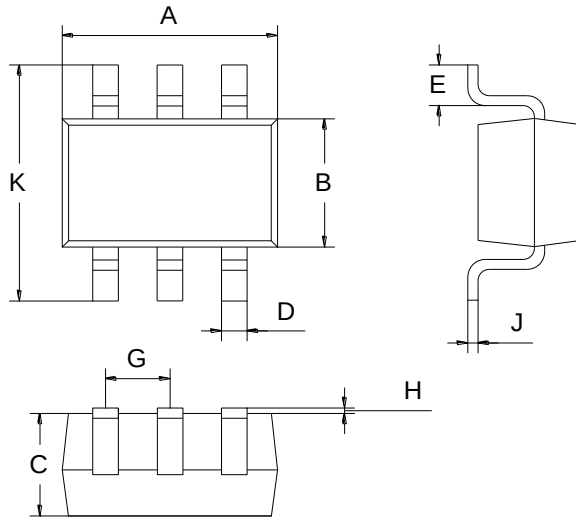


Fig 5 Output Current vs. Output Voltage

Package Outline Dimensions (Unit: mm)



SOT-363		
Dimension	Min.	Max.
A	2.00	2.20
B	1.15	1.35
C	0.85	1.05
D	0.15	0.35
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout (Unit: mm)

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