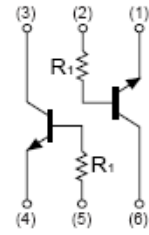


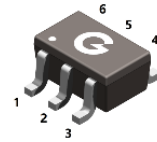
Features

- Two DTC114T transistors are built-in a package
- Transistor elements are independent, eliminating interference
- Mounting cost and area can be cut in half
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



$R_1=10K\Omega$



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
TUMH4N	SOT-363	3000 pcs / Tape & Reel	H4

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	150	mW
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 50\mu\text{A}, I_E = 0$	50	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 50\mu\text{A}, I_C = 0$	5	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 50\text{V}, I_E = 0$	-	-	0.5	μA
Emitter Cut-off Current	I_{EBO}	$V_{CB} = 4\text{V}, I_C = 0$	-	-	0.5	μA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 1\text{mA}$	100	-	600	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$	-	-	0.3	V
Transition Frequency	f_T	$I_C = 5\text{mA}, V_{CE} = 10\text{V}$ $f = 100\text{MHz}$	-	250	-	MHz
Input Capacitance	R_1		7	10	13	k Ω

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

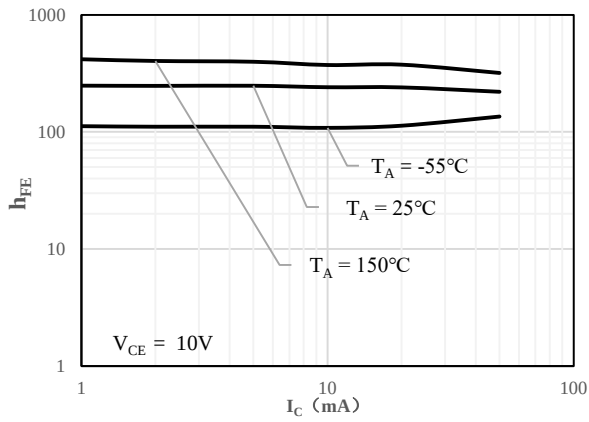


Fig 1 h_{FE} vs. I_C

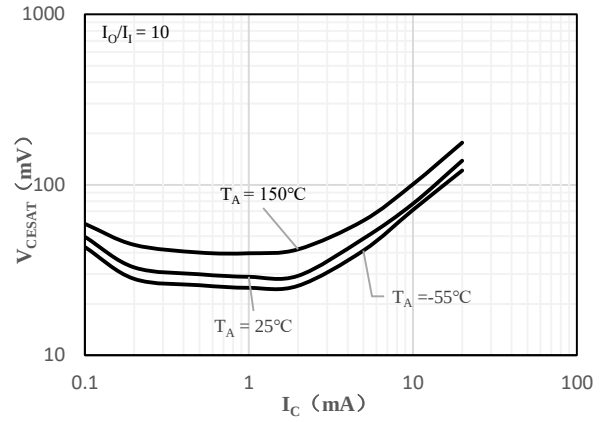


Fig 2 $V_{CE(sat)}$ vs. I_C

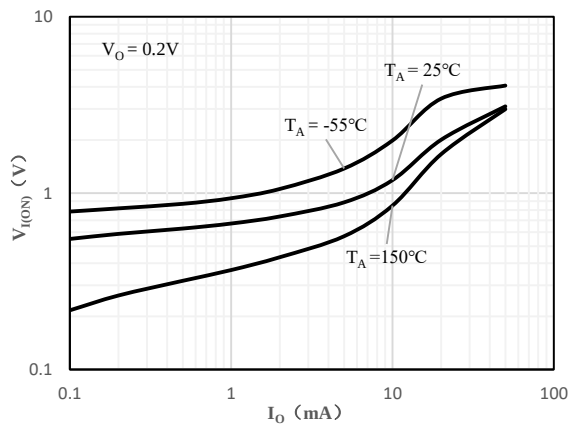


Fig 3 Input Voltage vs Output Current

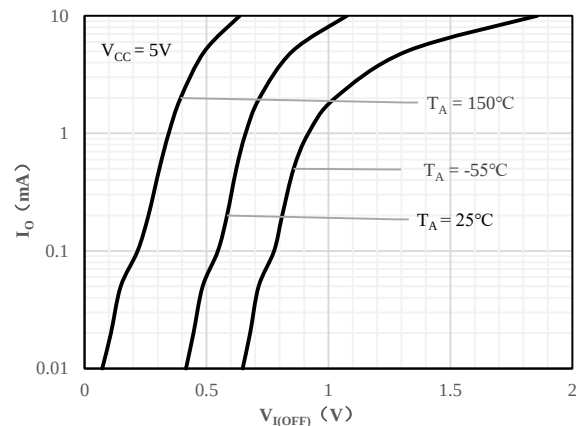


Fig 4 Output Current vs Input Voltage

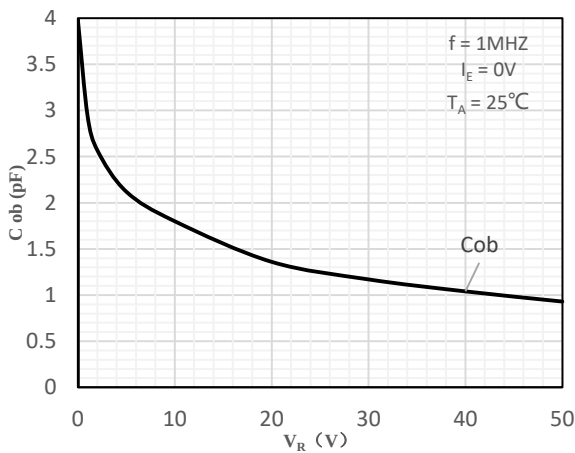
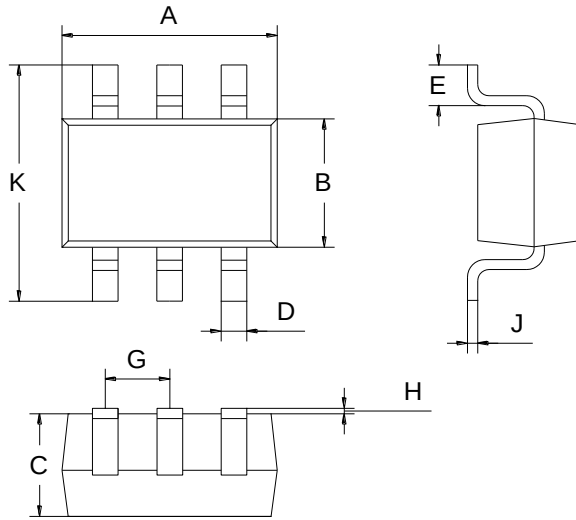


Fig 5 Output Capacitance

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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