

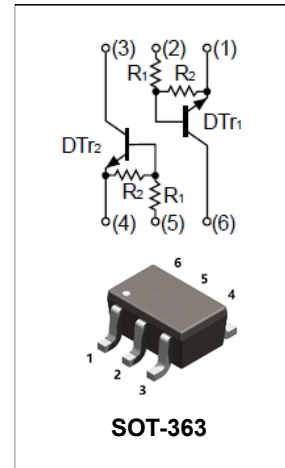


Features

- Two DTC144E transistors are built-in a package
- Transistor elements are independent, eliminating interference
- Mounting cost and area can be cut in half

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
UMH6N	SOT-363	3000 pcs / Tape & Reel	H6

Maximum Ratings (@ T_A = 25°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	100	mA
I _{C(Max)}	Peak Collector Current	100	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	150	mW
Thermal Resistance Junction-to-Air ^{*1}	R _{θJA}	413	°C/W
Thermal Resistance Junction-to-Case ^{*1}	R _{θJC}	257	°C/W
Thermal Resistance Junction-to-Lead ^{*1}	R _{θJL}	315	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 21mm * 17mm * 1mm FR4-epoxy P.C.B



Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Voltage	V _{I(OFF)}	V _{CC} = 5V, I _O = 100μA	0.5	-	-	V
Input Voltage	V _{I(ON)}	V _O = 0.3V, I _O = 2mA	-	-	3	V
Output Voltage	V _{O(on)}	I _O = 10mA, I _I = 0.5mA	-	-	0.3	V
Input Current	I _I	V _I = 5V	-	-	0.18	mA
Output Current	I _{O(off)}	V _{CC} = 50V, V _I = 0V	-	-	0.5	μA
DC Current Gain	G _I	V _O = 5V, I _O = 5mA	68	-	-	-
Input Resistor	R ₁		32.9	47	61.1	kΩ
Resistance ratio	R ₂ /R ₁		0.8	1	1.2	-
Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _E = 5mA f = 100MHz	-	250	-	MHz



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

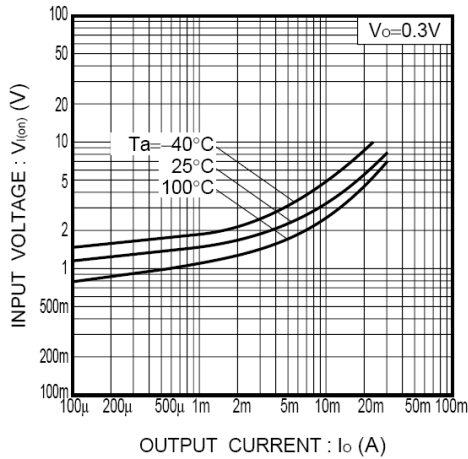


Fig.1 Input voltage vs. output current (ON characteristics)

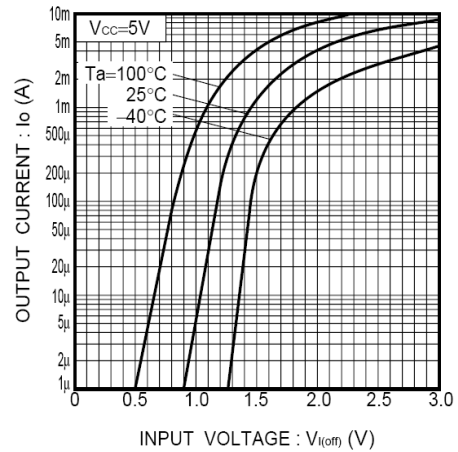


Fig.2 Output current vs. input voltage (OFF characteristics)

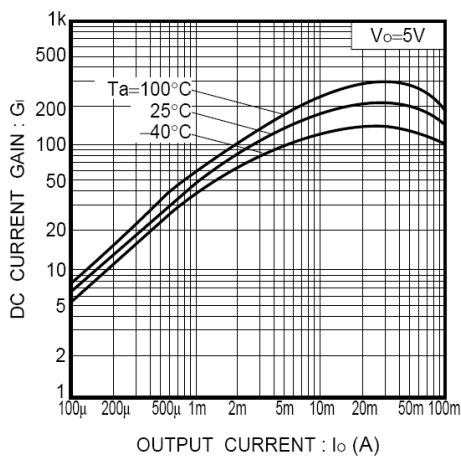


Fig.3 DC current gain vs. output current

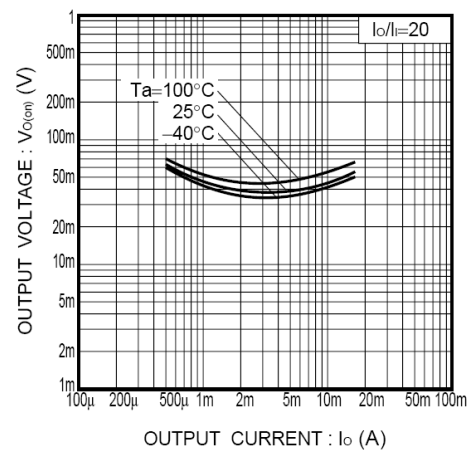
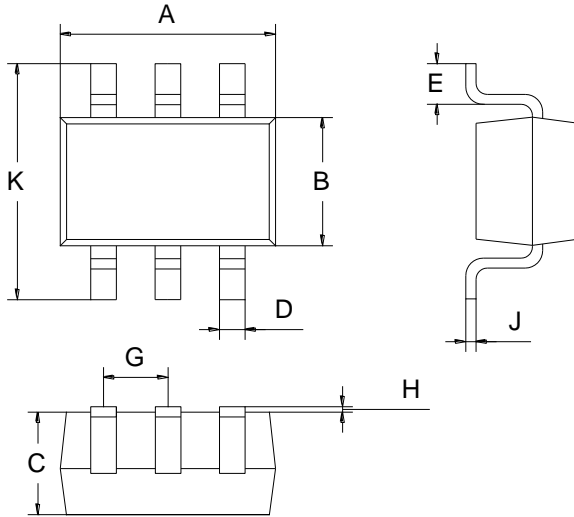


Fig.4 Output voltage vs. output current



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)

SOT-363

