Dual Digital Transistors

UMH3N

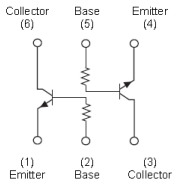
Features

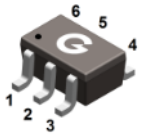
HF

- Two DTC143T chips in one 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





SOT-363

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
UMH3N	SOT-363	3000 pcs / Tape & Reel	H3

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
$I_{C(Max)}$	Collector Current	100	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	P_D	150	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	833	℃/W
Operating Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Note 1: 120mW per element must not be exceeded

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C = 50μA, I_E = 0	50	-	-	V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C = 1mA, I_B = 0	50	-	-	V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E = 50μA, I_C = 0	5	-	-	V
Collector-base Cut-off Current	I_{CBO}	V_{CB} = 50V, I_E = 0	-	-	0.5	μA
Emitter-base Cut-off Current	I_{EBO}	V_{EB} = 4V, I_C = 0	-	-	0.5	μA
DC Current Gain	h_{FE}	I_C = 1mA, V_{CE} = 5V	100	-	600	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C/I_B = 5mA/0.25mA	-	-	0.3	V
Input Resistor	R_1		3.29	4.7	6.11	kΩ
Gain-Bandwidth Product	f_T	V_{CE} = 10V, I_E = -5mA f = 100MHz	-	250	-	MHz

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

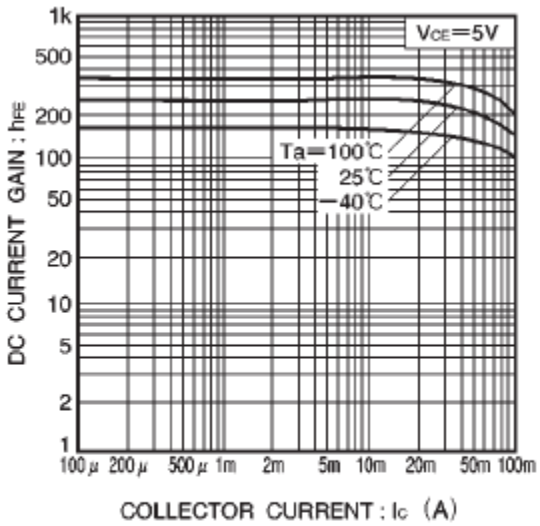


Fig.1 DC current gain vs. collector current

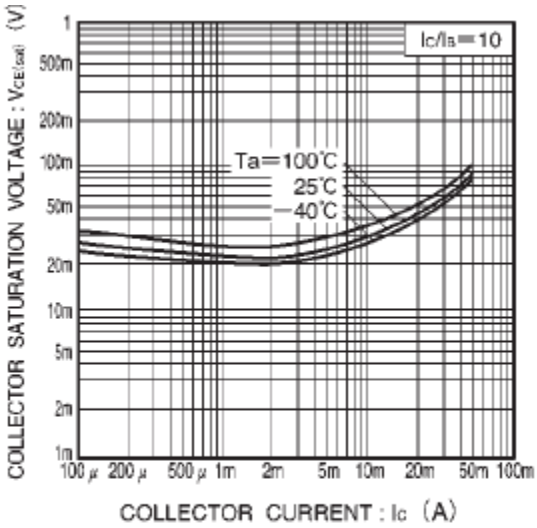
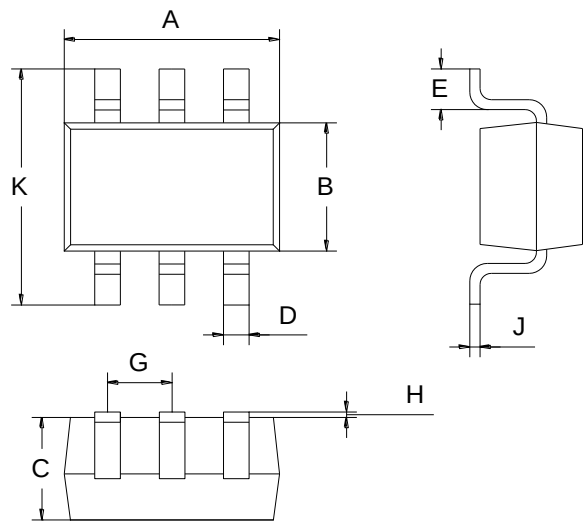


Fig.2 Collector-emitter saturation voltage vs. collector current

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)

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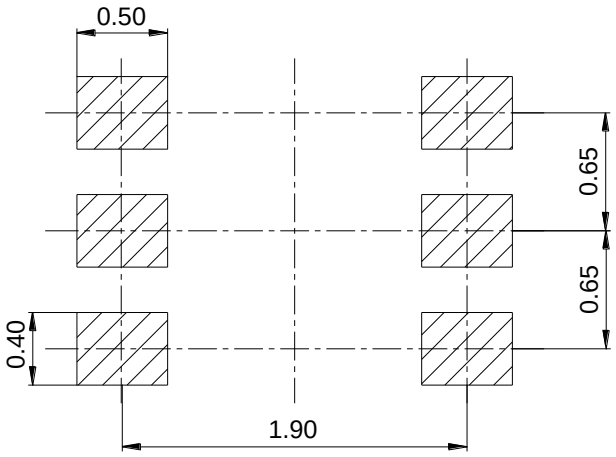

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