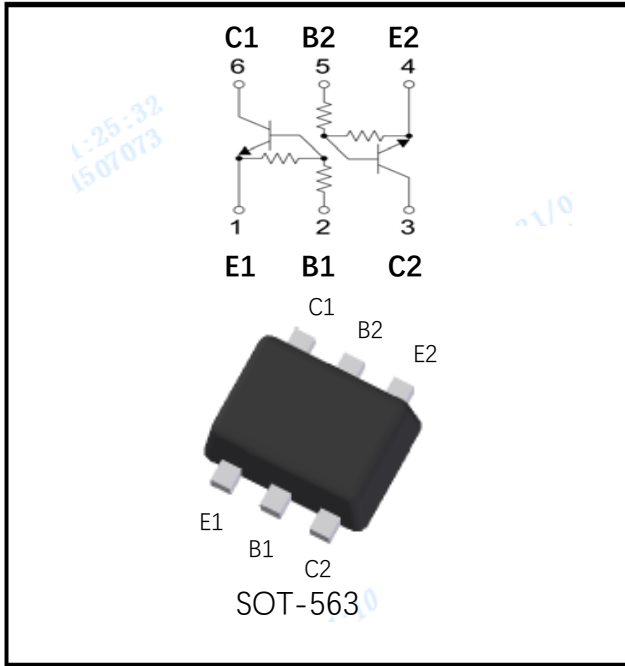


## Dual NPN Digital Transistors (Built-in Resistors)



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion
- NPN+NPN

### Mechanical Data

- **Package:** SOT-563
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** H1
- **Solid point:** E1 positioning point

### ■Maximum Ratings (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Supply Voltage	VCC	V		50
Input Voltage	VIN	V		-10 to +40
Output Current	IO	mA		100
Power Dissipation	PD	mW		150
Junction Temperature (Single)	Tj	°C		150
Storage Temperature	TSTG	°C		-55 to +150



# EMH1

## ■ Electrical Characteristics (Ta=25°C unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Input voltage	$V_{I(off)}$	V	VCC=5V, Ic=100uA	0.5	-	-
	$V_{I(on)}$	V	V0=0.2V, Ic=5mA	-	-	3
Output voltage	$V_{O(on)}$	V	I <sub>o</sub> / I <sub>i</sub> = 10mA/0.5 mA	-	-	0.3
Input current	I <sub>I</sub>	mA	V <sub>I</sub> =5V	-	-	0.36
Output current	I <sub>O(off)</sub>	uA	VCC=50V, V <sub>i</sub> =0	-	-	0.5
DC current gain	G <sub>I</sub>		V <sub>o</sub> =5V, I <sub>o</sub> =5mA	56	-	-
Input resistance	R <sub>1</sub>	kΩ		15.4	22	28.6
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>			0.8	1	1.2
Transition frequency	f <sub>T</sub>	MHz	VCE=10V, I <sub>E</sub> =5mA, f=100MHz	-	250	-

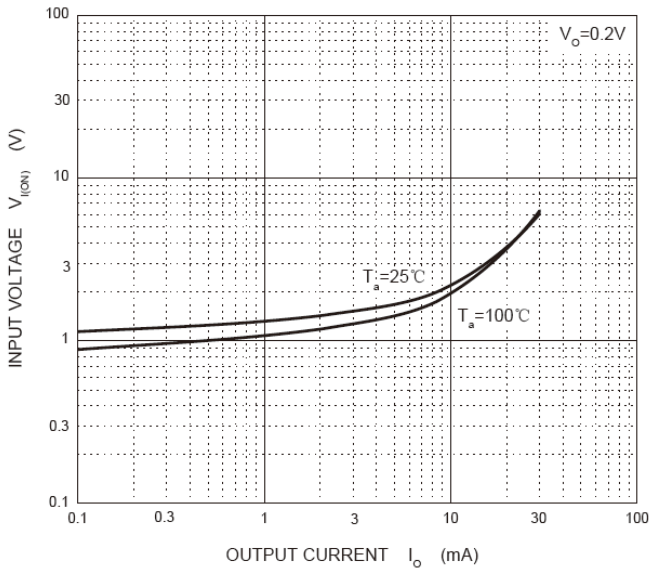
## ■ Ordering Information (Example)

Preferred P/N	Packing Code	Unit Weight(G)	Minimum Package(Pcs)	Inner Box Quantity(Pcs)	Outer Carton Quantity(Pcs)	Delivery Mode
EMH1	F2	Approximate 0.0035	3000	30000	120000	7" reel

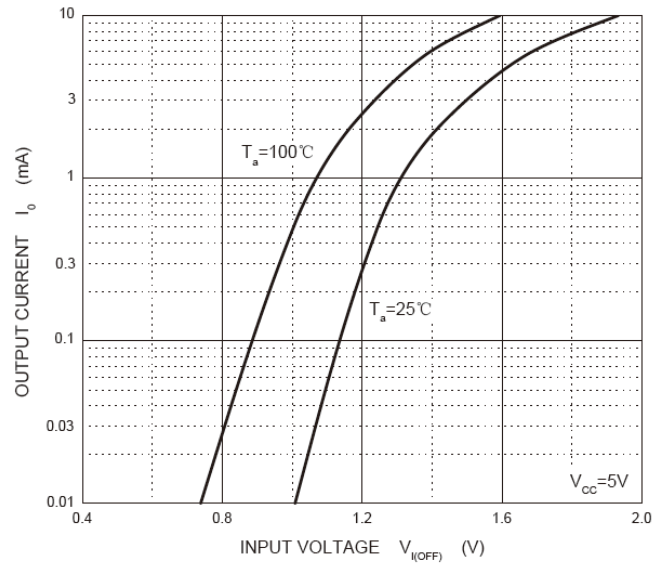


■ Characteristics (Typical)

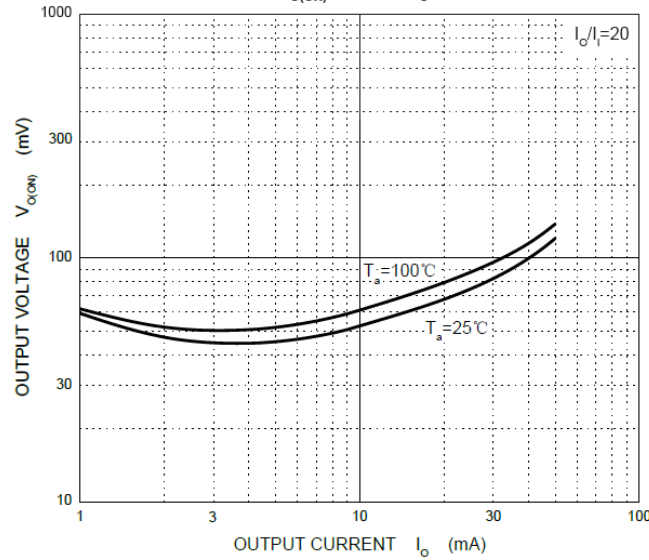
ON Characteristics



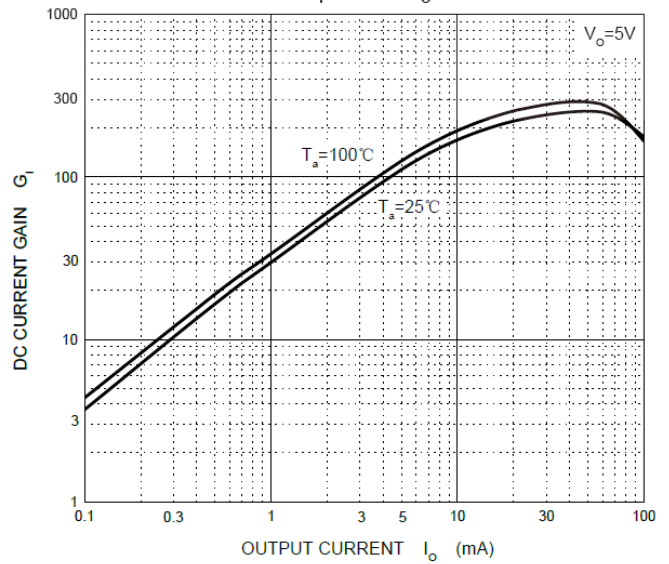
OFF Characteristics



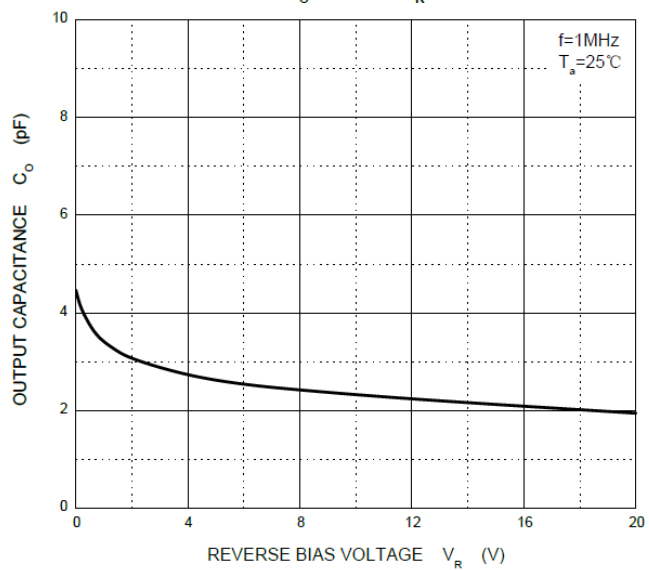
$V_{O(ON)}$  —  $I_O$



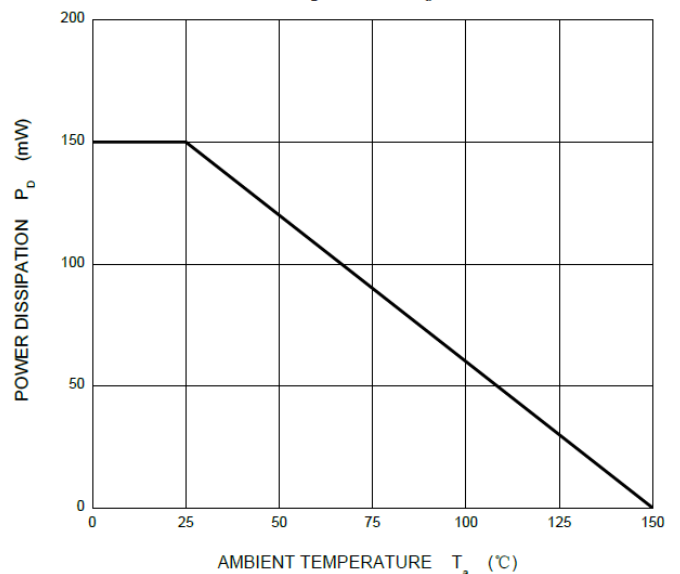
$G_I$  —  $I_O$



$C_O$  —  $V_R$

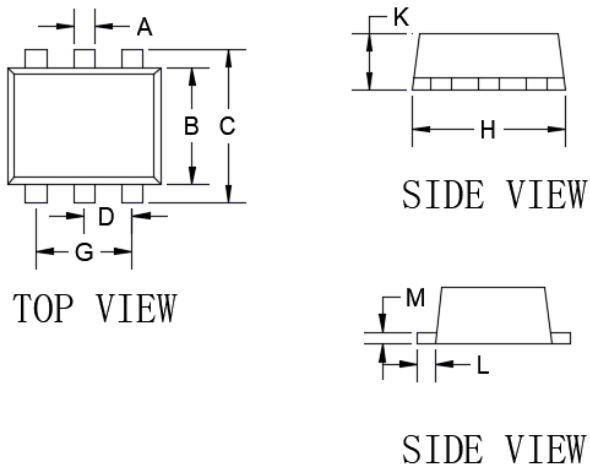


$P_D$  —  $T_a$



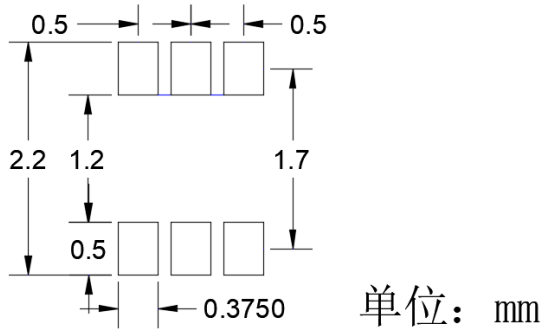
## ■ Outline Dimensions

SOT-563



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.006	0.011	0.150	0.300
B	0.043	0.051	1.100	1.300
C	0.059	0.067	1.500	1.700
D	0.016	0.024	0.400	0.600
G	0.035	0.043	0.900	1.100
H	0.059	0.067	1.500	1.700
K	0.021	0.026	0.550	0.650
L	0.004	0.011	0.100	0.300
M	0.004	0.007	0.100	0.180

## ■ Suggested Pad Layout



SUGGESTED SOLDER PAD LAYOUT



# EMH1

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