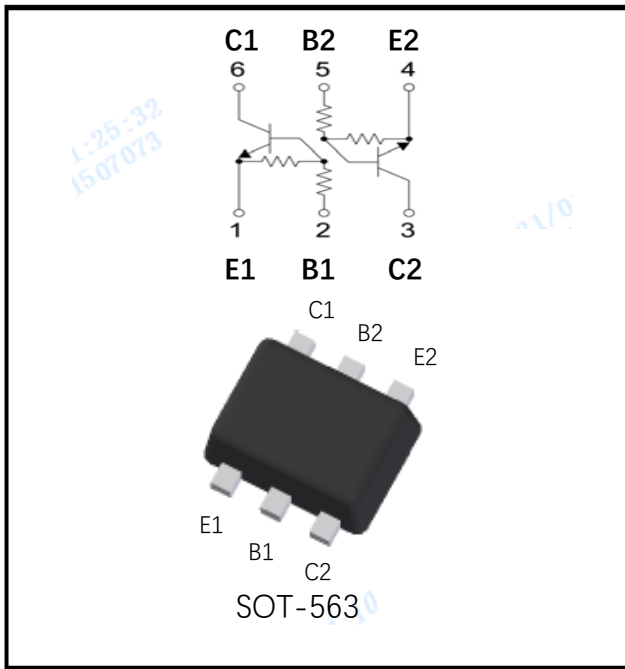


## Dual NPN Digital Transistors (Built-in Resistors)



### 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:** H13
- **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		-5 to +30
Output Current	IO	mA		100
Power Dissipation	PD	mW		150
Junction Temperature (Single)	Tj	°C		150
Storage Temperature	TSTG	°C		-55 to +150



# EMH13

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

Item	Symbol	Unit	Conditions	Min	TYP	Max
Input voltage	$V_{I(off)}$	V	$V_{CC}=5V, I_c=100\mu A$ $V_0=0.3V, I_c=5mA$	0.5		
	$V_{I(on)}$	V				1.3
Output voltage	$V_{O(on)}$	V	$I_o / I_i = 5mA / 0.25 mA$			0.3
Input current	$I_I$	mA	$V_I=5V$			1.8
Output current	$I_{O(off)}$	$\mu A$	$V_{CC}=50V, V_i=0$			0.5
DC current gain	$G_I$		$V_o=5V, I_o = 10mA$	80		
Input resistance	$R_1$	k $\Omega$		3.29	4.7	6.11
Resistance ratio	$R_2/R_1$			8	10	12
Transition frequency	fT	MHz	$V_o=10V, I_O=5mA, f=100MHz$		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
EMH13	F2	Approximate 0.0035	3000	30000	120000	7" reel



■ Characteristics (Typical)

Fig. 1 - DC Current Gain Characteristics

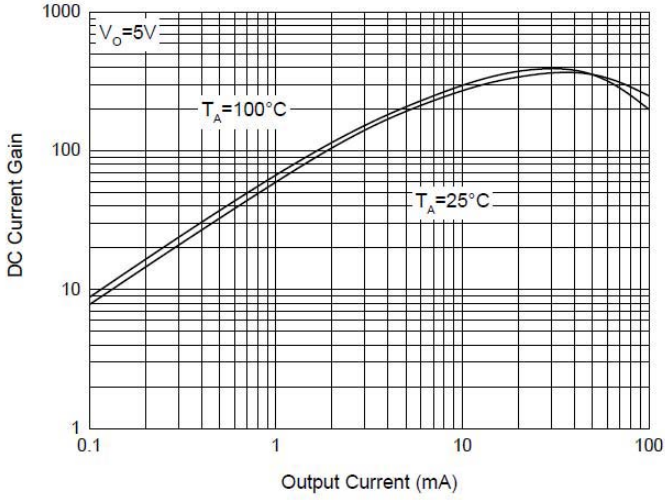


Fig. 2 - Input Voltage (on) Characteristics

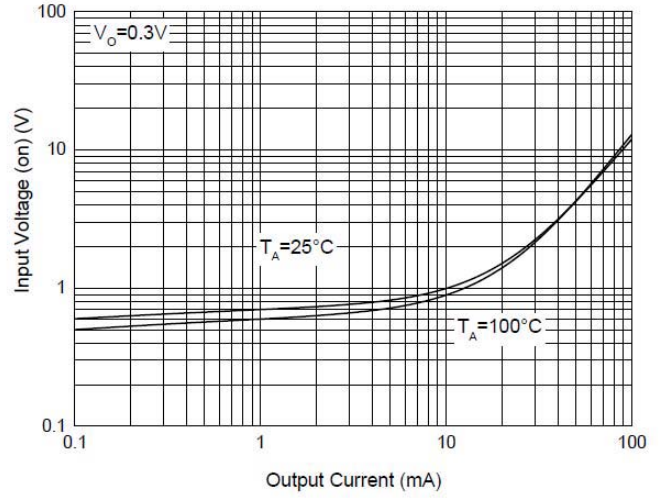


Fig. 3 - Input Voltage (off) Characteristics

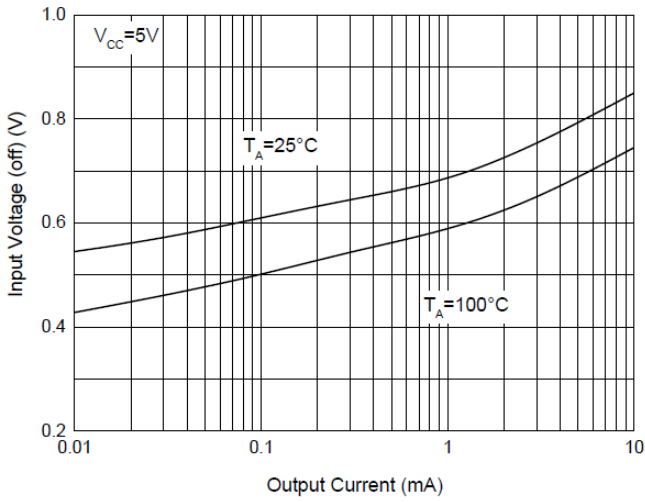
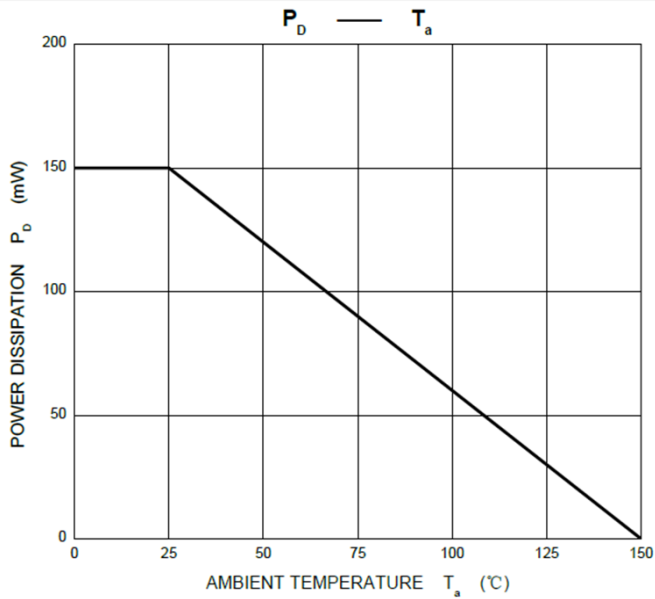
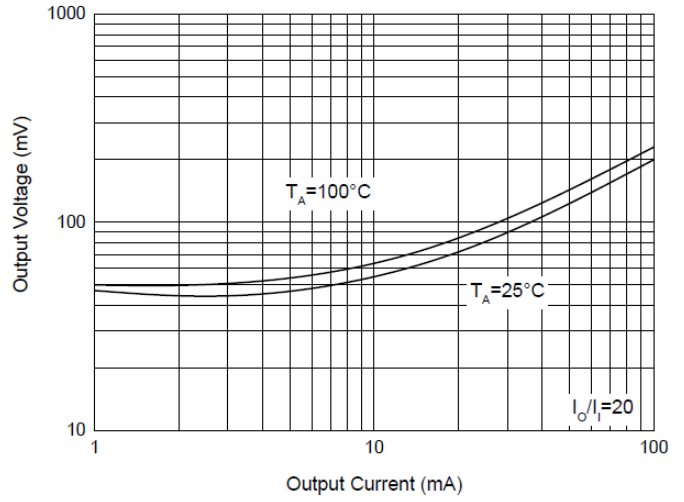
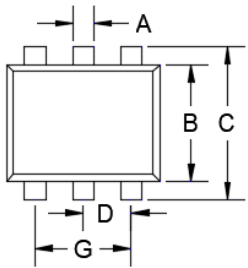


Fig. 4 - Output Voltage Characteristics

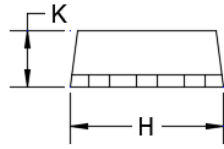


## ■ Outline Dimensions

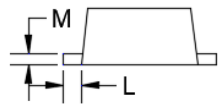
SOT-563



TOP VIEW



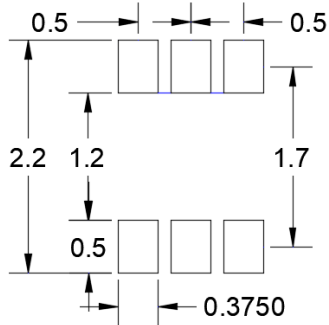
SIDE VIEW



SIDE VIEW

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



单位: mm

SUGGESTED SOLDER PAD LAYOUT



## EMH13

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