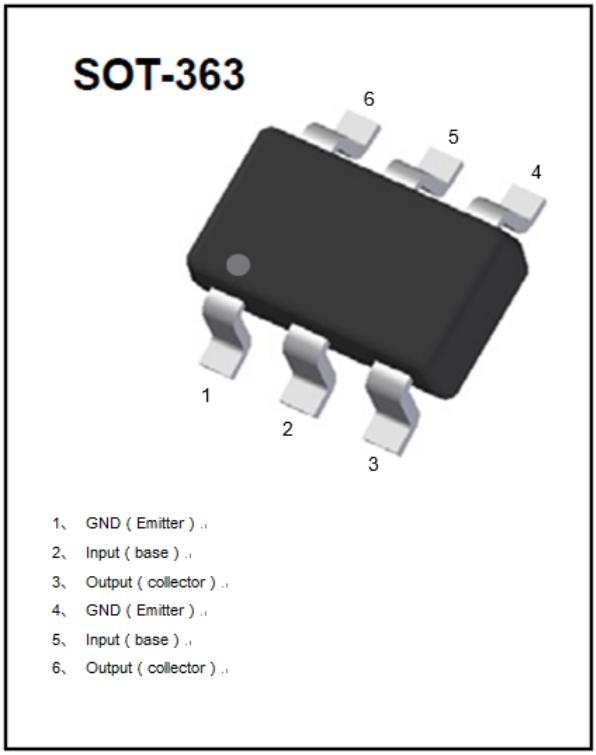
Dual NPN Digital Transistors (Built-in Resistors)



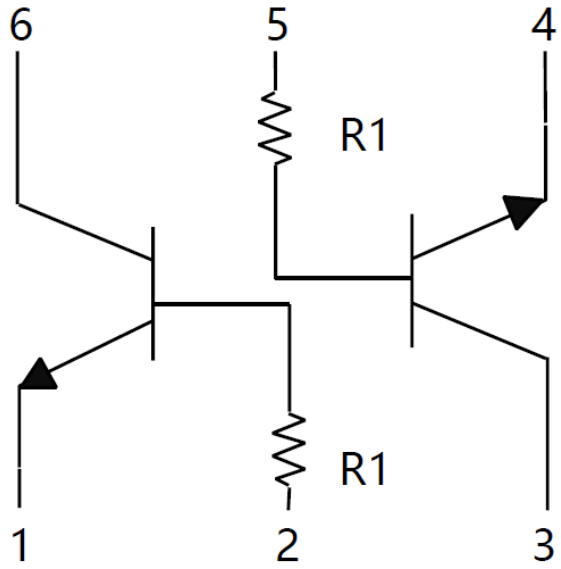
Features

- Epoxy meets UL-94 V-0 flammability rating
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- Surface mount package ideally Suited for Automatic Insertion

Mechanical Data

- **Package:** SOT-363
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:**H3

■Equivalent circuit



■Maximum Ratings (Ta=25℃ Unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	VALUE
Collector-Emitter Voltage	V_{CEO}	V		50
Collector-Base Voltage	V_{CBO}	V		50
Emitter-Base Voltage	V_{EBO}	V		5
Output Current	Ic	mA		100
Power Dissipation	P_D	mW		150
Junction Temperature （Single）	Tj	℃		150
Storage Temperature	T_{STG}	℃		-55 to +150

■Electrical Characteristics (Ta=25℃ unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Collector-Base Breakdown Voltage	V_{CBO}	V	I_C=50uA	50		
Collector-Emitter Breakdown Voltage	V_{CEO}	V	I_C=1mA	50		
Emitter-Base Breakdown Voltage	V_{EBO}	V	I_E=50uA	5		
Collector Cut-off Current	I_{CBO}	uA	V_{CB}=50V			0.5
Emitter Cut-off Current	I_{EBO}	uA	V_{EB}=4V			0.5
DC current gain	h_{FE}		V_{CE}=5V, I_C =1mA	100		600
Input resistance	R_1	kΩ		3.29	4.7	6.11
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	I_C =5mA,I_B=0.25mA			0.3
Transition frequency	f_T	MHz	V_{CE}=10V,I_E=5mA,f=100MHz		250	

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
UMH3N	F2	Approximate 0.009g	3000	30000	120000	7” reel

■ **Characteristics** (Typical)

Fig. 1 - Static Characteristics

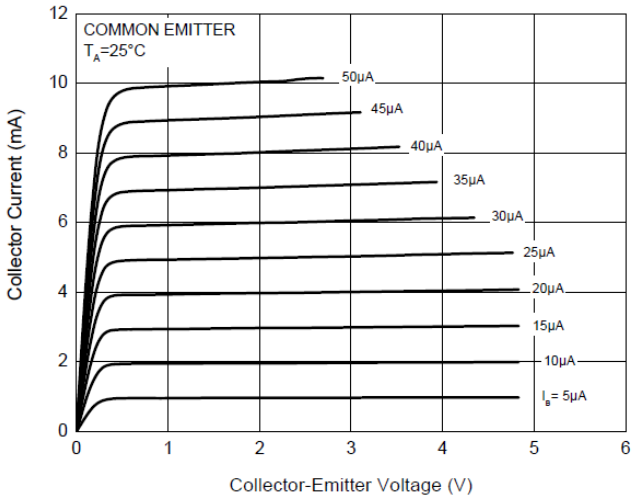


Fig. 2 - DC Current Gain Characteristics

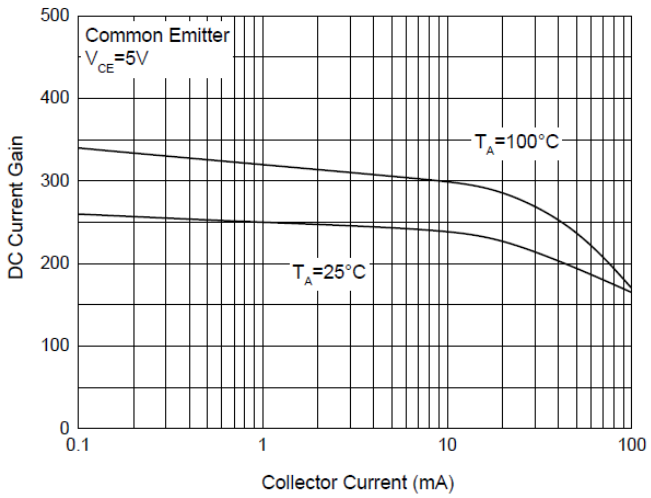
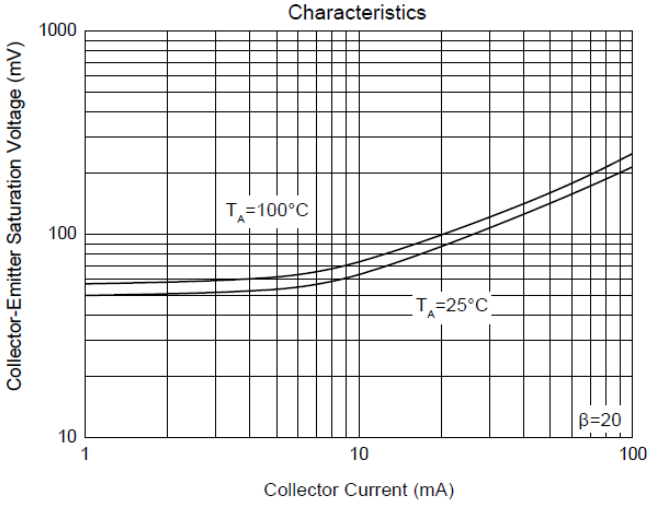
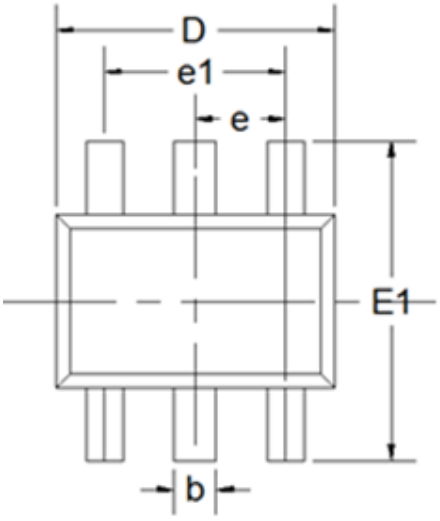


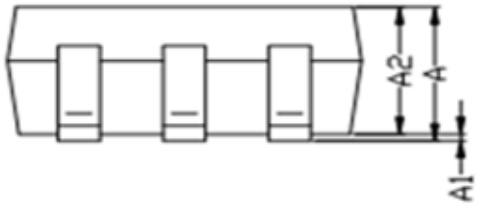
Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

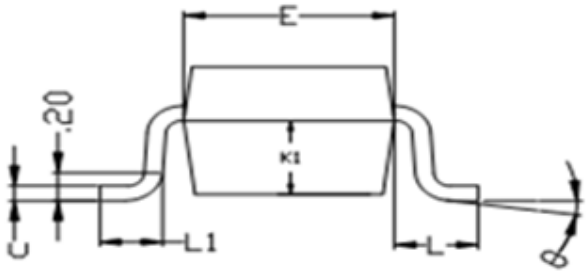


■SOT-363 Package Outline Dimensions

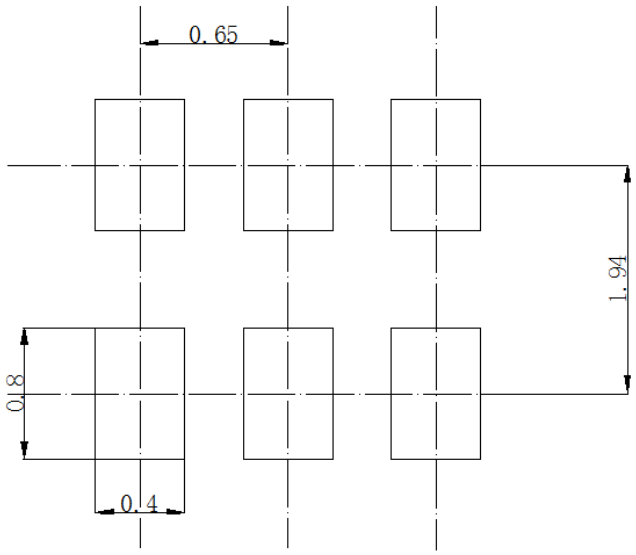


DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.035	0.043	0.9	1.1
A1	0	0.004	0	0.1
A2	0.035	0.039	0.9	1
b	0.006	0.014	0.15	0.35
c	0.002	0.01	0.05	0.25
D	0.071	0.087	1.8	2.2
E	0.045	0.053	1.15	1.35
E1	0.085	0.096	2.15	2.45
e	0.026Typ		0.65Typ	
e1	0.047	0.055	1.2	1.4
L	0.021Typ		0.525Typ	
L1	0.01	0.018	0.26	0.46
θ	0°	8°	0°	8°





■SOT-363 Suggested Pad Layout



Unit：mm

Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise. Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.