Dual Digital Transistor (NPN+NPN)

FEATURES

- Epitaxial planar die construction
- Surface device type mounting
- Two DTC114E chip in a package
- Transistor elements are independent, eliminating interference
- Mounting cost and area be cut in half
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
V_{cc}	50	V
$I_{C(max)}$	100	mA
P_D	150	mW
$T_{J\ MAX}$	150	°C
Package	SOT-363	
Configuration	Dual dies	

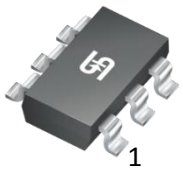
Pb-Free RoHS COMPLIANT HALOGEN FREE

APPLICATIONS

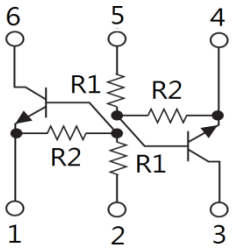
- Inverter circuit
- Interface circuit
- Driver circuit

MECHANICAL DATA

- Case: SOT-363
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: As marked
- Weight: 7.10mg (approximately)



SOT-363



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**UMH11N**	**UNIT**
Marking code on the device		H11	
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	-10 - 40	V
Output current	I_O	50	mA
	$I_{C(max)}$	100	mA
Power dissipation	P_D	150	mW
Junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

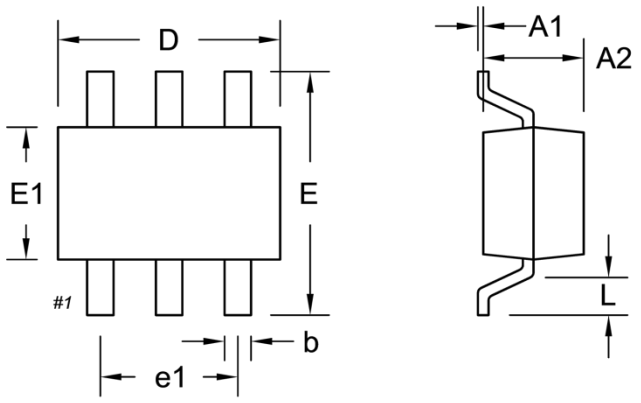
PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Input voltage	V_{CC} = 5V, I_O = 100uA	$V_{I(off)}$	0.5	-	-	V
	V_O = 0.3V, I_O = 10mA	$V_{I(on)}$	-	-	3	V
Output voltage	I_O / I_I = 10mA / 0.5mA	$V_{O(on)}$	-	0.1	0.3	V
Input current	V_I = 5V	I_I	-	-	0.88	mA
Onput current	V_{CC} = 50V, V_I = 0V	$I_{O(off)}$	-	-	0.5	uA
DC current gain	V_O = 5V, I_O = 5mA	G_I	30	-	-	-
Input resistance		R_1	7	10	13	kΩ
Resistance ratio		R_2/R_1	0.8	1	1.2	-
Transition frequency	V_{CE} = 10V, I_E = 5mA, f = 100MHz	f_T	-	250	-	MHz

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
UMH11N REG	SOT-363	3K / 7" Reel

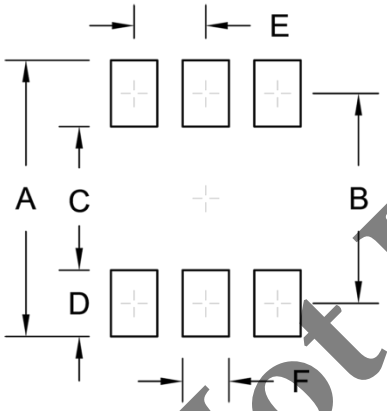
PACKAGE OUTLINE DIMENSIONS

SOT-363



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A1	0.00	0.10	0.000	0.004
A2	0.85	1.05	0.033	0.041
b	0.15	0.35	0.006	0.014
D	2.00	2.20	0.079	0.087
E	2.15	2.45	0.085	0.096
E1	1.15	1.35	0.045	0.053
e1	1.20	1.40	0.047	0.055
L	0.25	0.46	0.010	0.018

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	2.50	0.098
B	1.90	0.075
C	1.30	0.051
D	0.60	0.024
E	0.65	0.026
F	0.42	0.017

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