

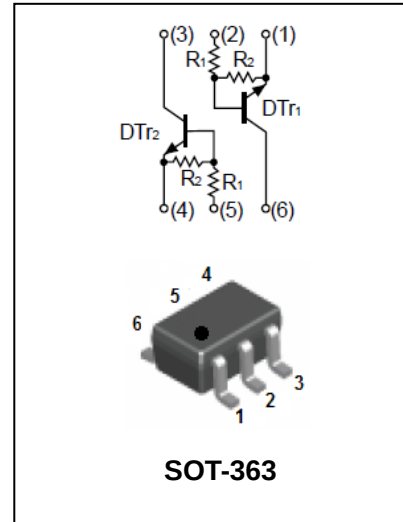
General purpose (dual digital transistors)

TUMH1N

FEATURES

HF

- Two DTC124Es chips in SOT-363 package
- Transistor elements are independent, eliminating interference
- Mounting cost and area can be cut in half
- Halogen free
- Qualified to AEC-Q101 standards for high reliability



APPLICATIONS

- Dual NPN small signal surface mount transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
TUMH1N	H1	SOT-363

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	50	V
V_{IN}	Input Voltage	-10 to +40	V
I_O	Output Current	30	mA
$I_{C(MAX.)}$	Collector Current	100	mA
P_c	Power Dissipation	150	mW
T_J, T_{STG}	Junction and Storage Temperature	-55 to +150	°C

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	$V_{CC}=5V, I_O=100\mu A$	0.5			V
	$V_{I(on)}$	$V_O=0.2V, I_I=5mA$			3	V
Output Voltage	$V_{O(on)}$	$I_O / I_I=10mA / 0.5mA$		0.1	0.3	V
Input Current	I_I	$V_I=5V$			0.36	mA
Output Current	$I_{O(off)}$	$V_{CC}=50V, V_I=0V$			0.5	uA
DC Current Gain	G_I	$V_O=5V, I_O=5mA$	56			
Input Resistor	R_1		15.4	22	28.6	kΩ
Resistance Ratio	R_2/R_1		0.8	1	1.2	
Gain-Bandwidth Product (NOTE 2)	f_T	$V_{CE}=10V, I_E=-5mA,$ $f=100MHz$		250		MHz

NOTE 2: Transition frequency of the device.

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

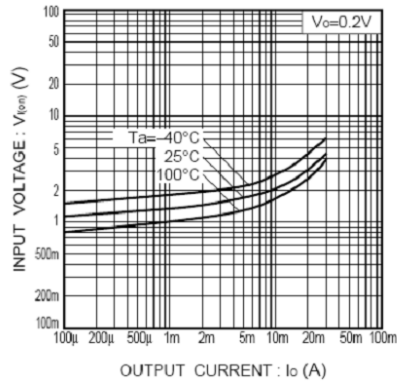


Fig.1 Input voltage vs. output current (ON characteristics)

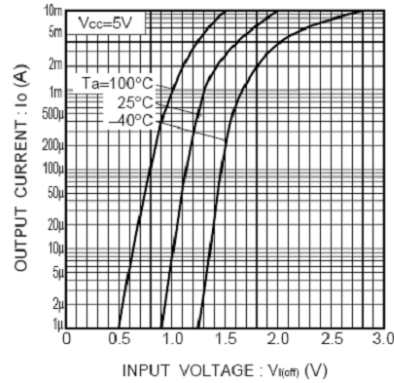


Fig.2 Output current vs. input voltage (OFF characteristics)

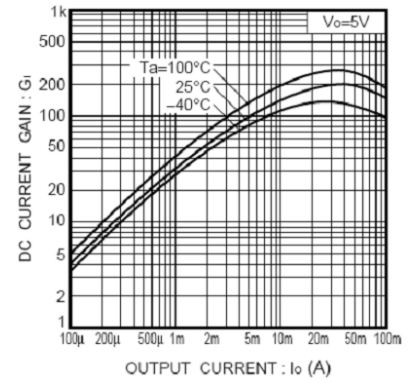


Fig.3 DC current gain vs. output current

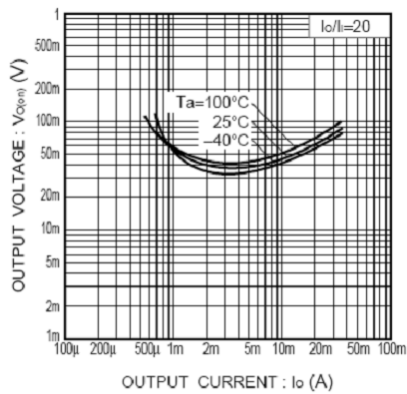


Fig.4 Output voltage vs. output current

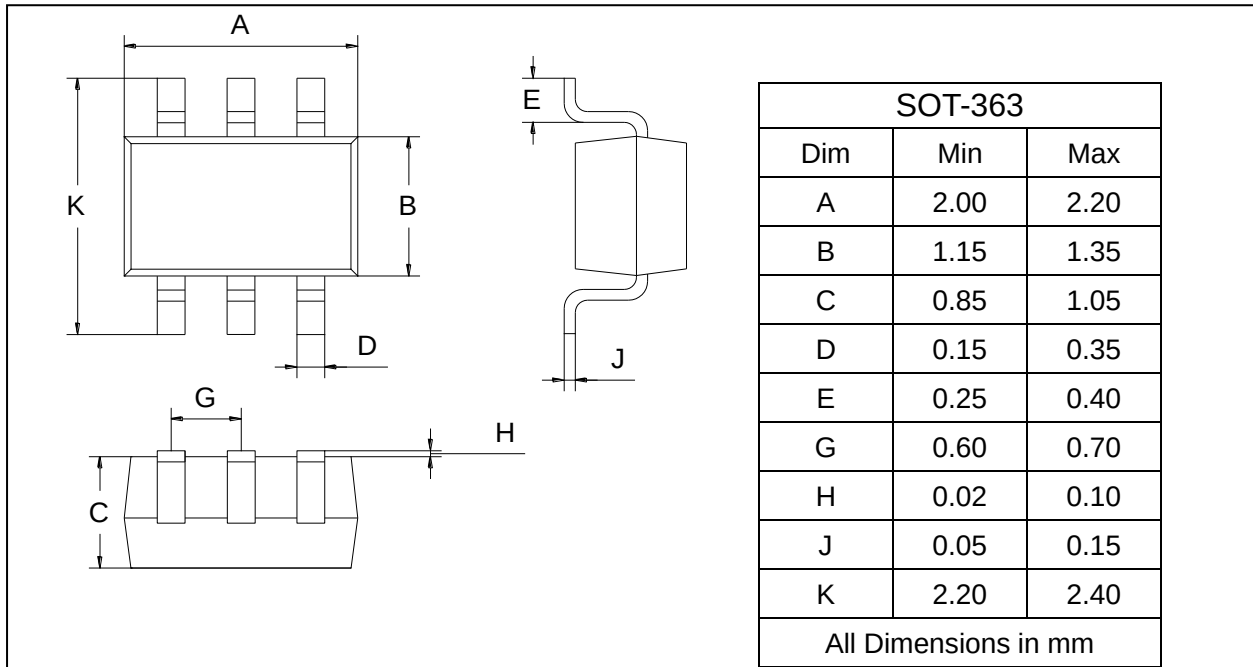
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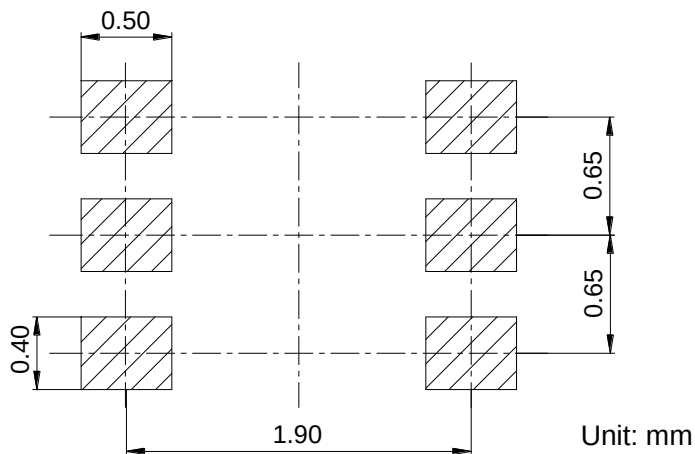
PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
TUMH1N	SOT-363	3000 pcs / Tape & Reel