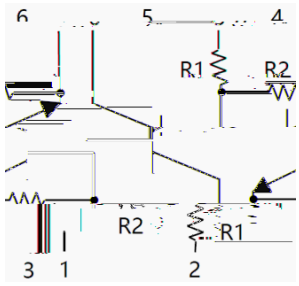
UMH18N

RoHS COMPLIANT

Dual NPN Digital Transistors (Built-in Resistors)



Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic Insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

Package SOT-363

Terminals Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25 Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				H18
Collector-base voltage	V_{CC}	V		50
Collector-emitter voltage	V_{IN}	V		-7 to +20
Collector current	I_O	mA		100
Power dissipation	P_D	mW		150
Operation junction temperature	T_J			-55 to +150
Storage temperature	T_{STG}			-55 to +150

■ Electrical Characteristics (Ta=25 Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Input voltage	$VI_{(off)}$	V	V_{CC}=5V,Ic=100uA	0.3		
	$VI_{(on)}$	V	Vo=0.3V,Ic=20mA			2.5
Output voltage	$Vo_{(on)}$	V	Io /I_I =10mA/0.5 mA			0.3
Input current	I_I	mA	V_I=5V			0.6
Output current	$I_{O(off)}$	uA	V_{CC}=50V, V_I=0			0.5
DC current gain	G_I		Vo=5V, Io =10mA	50		
Input resistance	R_1	kΩ		3.3	4.7	6.1
Resistance ratio	R_2/R_1			1.7	2.1	2.6
Transition frequency	f_T	MHz	Vo=10V,I_O=5mA,f=100MHz		250	

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	RθJ-A(1)	/W	834
Thermal resistance, junction-to-case	RθJ-C(1)	/W	667

Note:

1 Device mounted on PCB, single-sided copper with standard footprint

■Characteristics

Fig 1 Input Voltage (On) Characteristics

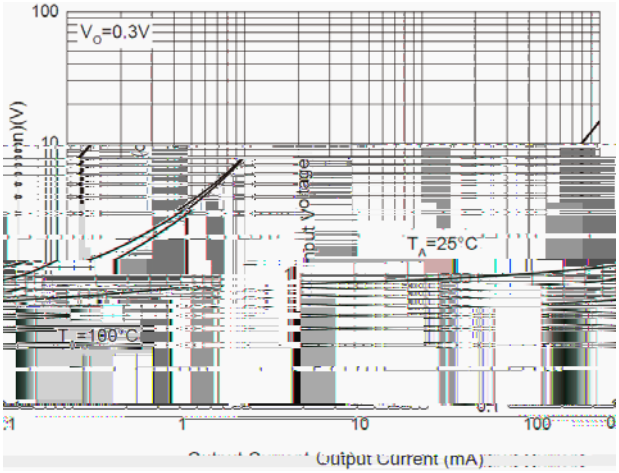


Fig 2 Input Voltage (Off) Characteristic

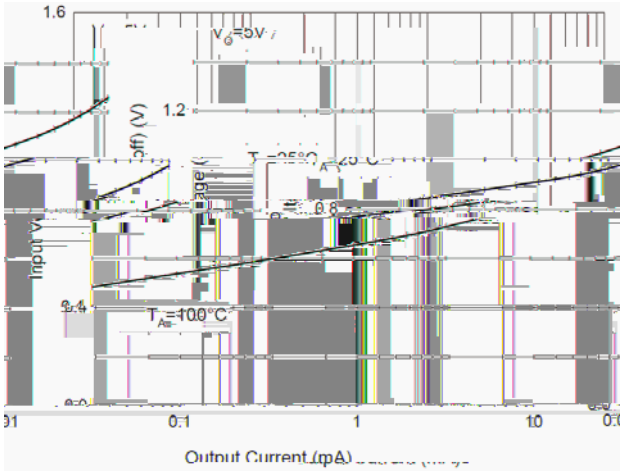


Fig 3 DC Current Gain Characteristics

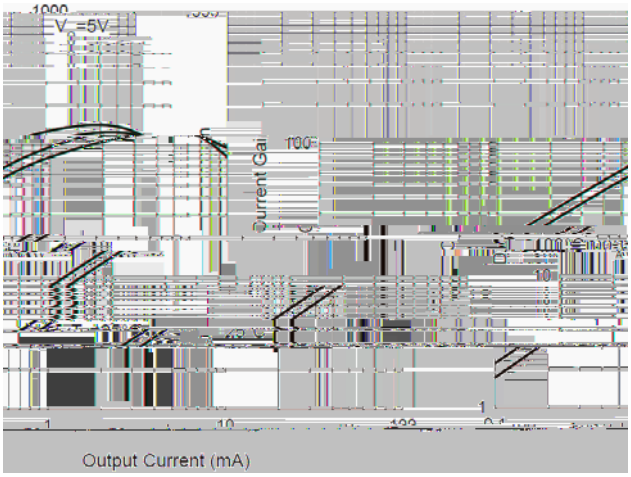


Fig 4 Output Voltage Characteristics

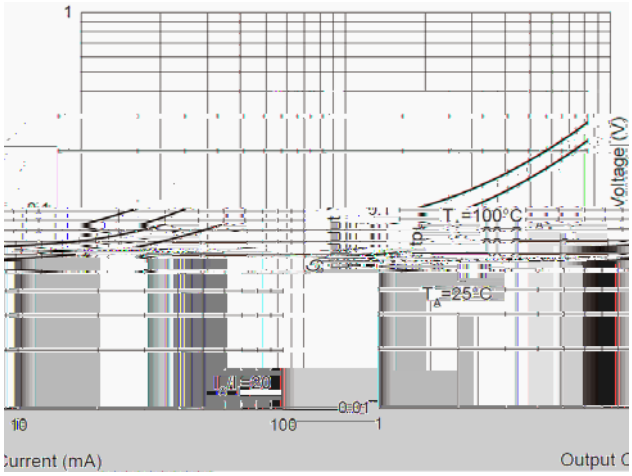
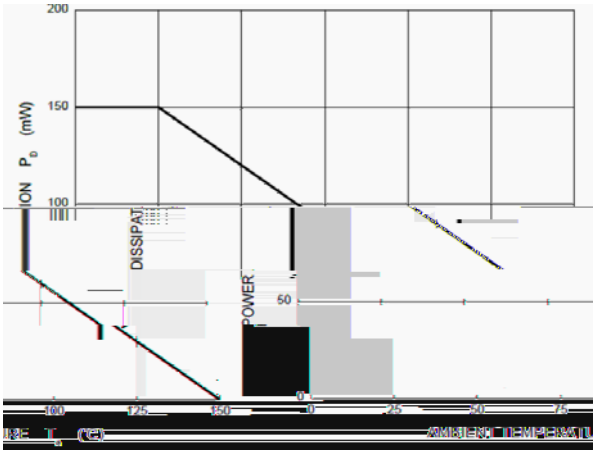


Fig 5 P_D-Ta Curve



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