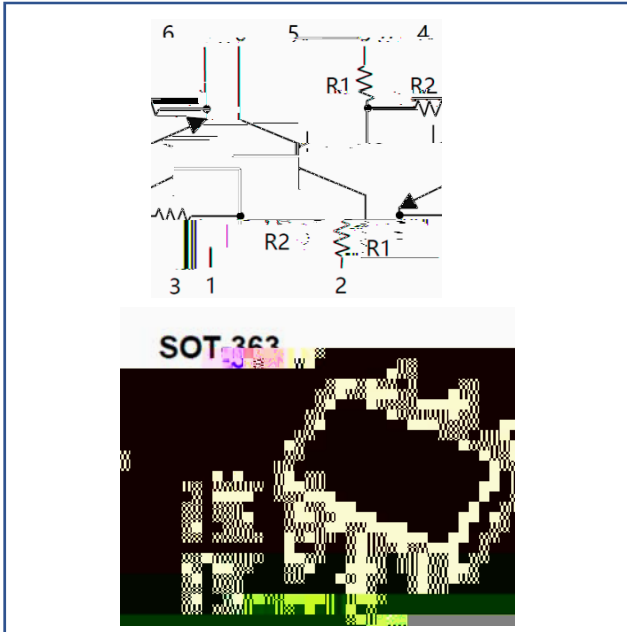


Dual NPN Digital Transistors (Built-in Resistors)



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



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Electrical Characteristics (T_a=25 Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Input voltage	V _{I(off)}	V	V _{CC} =5V, I _C =100uA	0.3		
	V _{I(on)}	V	V _O =0.3V, I _C =20mA			2.5
Output voltage	V _{O(on)}	V	I _O / 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		V _O =5V, I _O = 10mA	50		
Input resistance	R ₁	k		3.3	4.7	6.1
Resistance ratio	R ₂ /R ₁			1.7	2.1	2.6
Transition frequency	f _T	MHz	V _O =10V, I _O =5mA, f=100MHz		250	

Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{J-A} ⁽¹⁾	/W	834
Thermal resistance, junction-to-case	R _{J-C} ⁽¹⁾	/W	667

Note:

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



Characteristics

Fig 1 Input Voltage (On) Characteristics

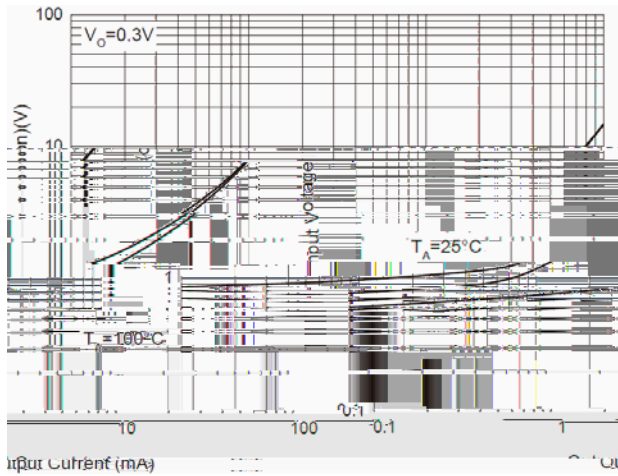


Fig 2 Input Voltage (Off) Characteristic

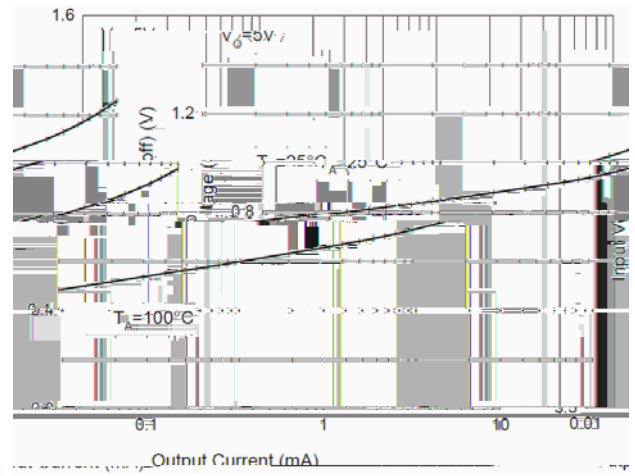


Fig 3 DC Current Gain Characteristics

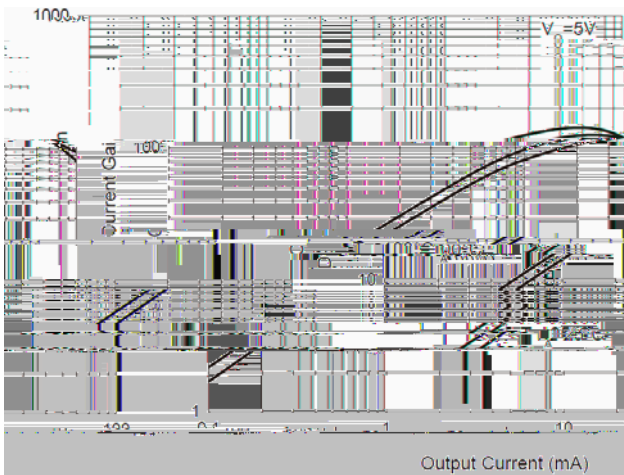


Fig 4 Output Voltage Characteristics

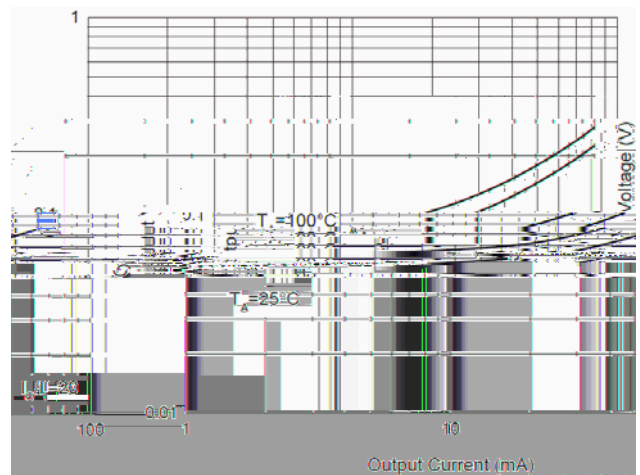
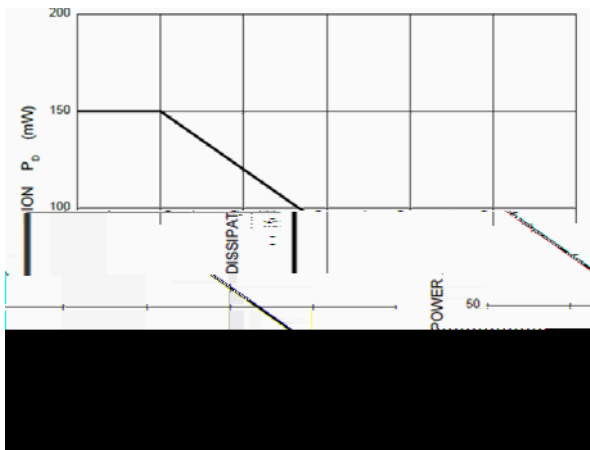


Fig 5 P_D-T_a Curve





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