



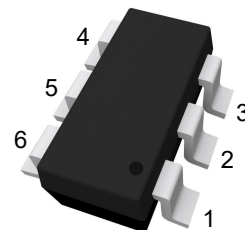
MMDTA143Z

Double Silicon PNP Digital Transistor

Features

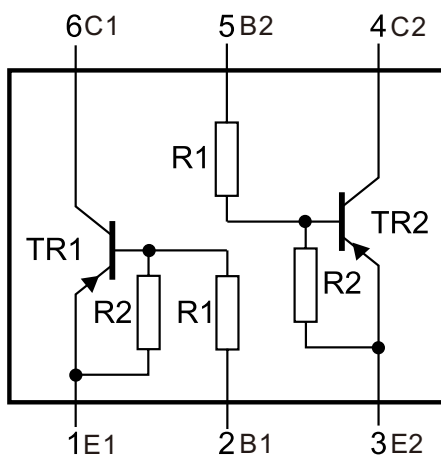
- Simplify circuit design
- With built-in bias resistors: $R1=4.7K\Omega$, $R2=47K\Omega$

SOT-23-6



1. Emitter1 2. Base1 3. Emitter2
4. Collector2 5. Base2 6. Collector1

Equivalent Circuit



Resistor Values/Marking Code

Type	R1 (K Ω)	R2 (K Ω)	Marking Code
MMDTA143Z	4.7	47	143Z

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Output Voltage	$-V_O$	50	V
Input Voltage	$-V_I$	30,-5	V
Output Current	$-I_O$	100	mA
Maximum Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$



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Electrical Characteristics (T_A=25°C)

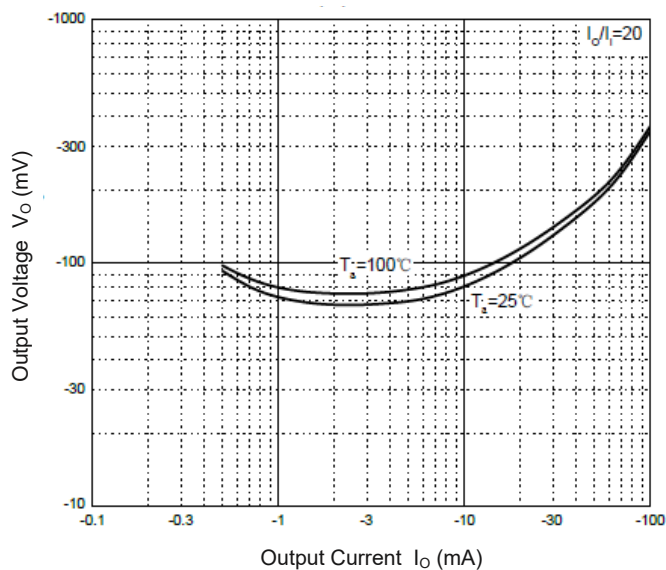
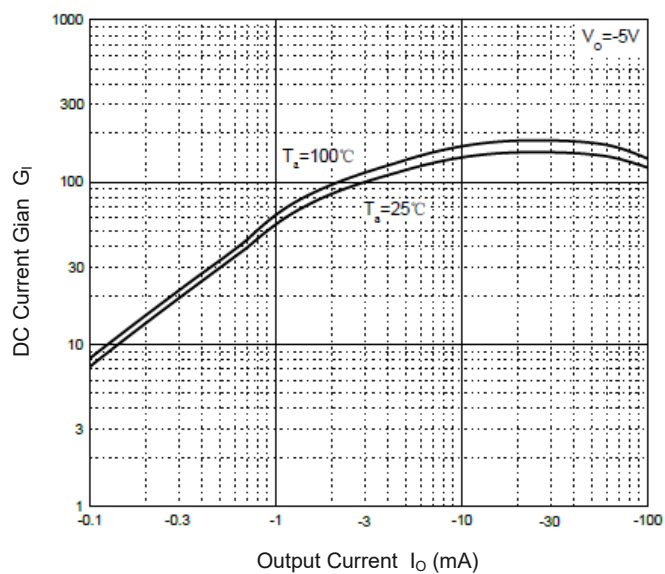
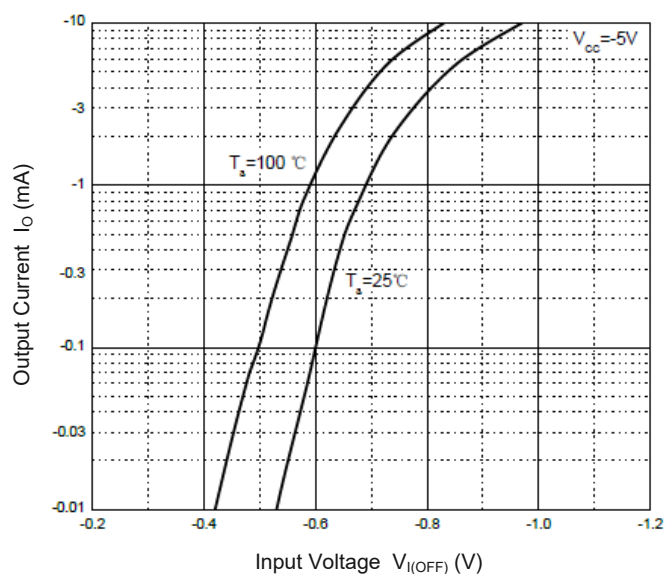
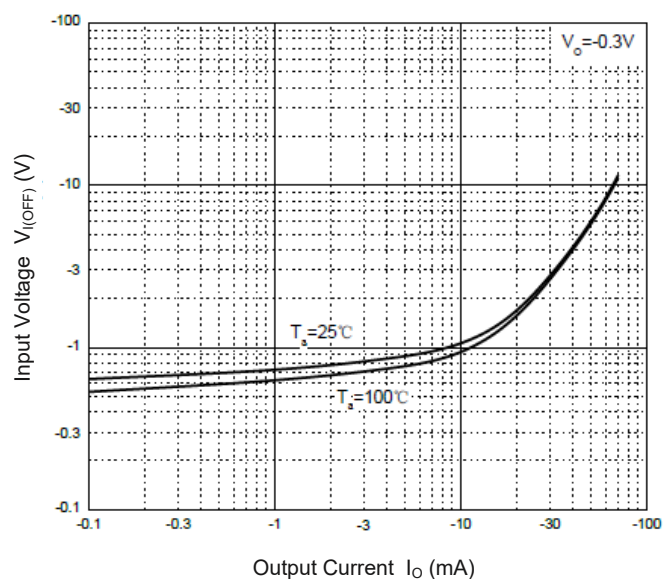
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V _O = -5 V, I _O = -10 mA	G _I	80	--	--	--
Output Cutoff Current at V _O = -50 V	-I _{O(OFF)}	--	--	500	nA
Input Current at V _I = -5 V	-I _I	--	--	1.8	mA
Output Voltage (ON) at I _O = -10 mA, I _I = -0.5 mA	-V _{O(ON)}	--	--	0.3	V
Input Voltage (ON) at V _O = -0.3 V, I _O = -2 mA	-V _{I(ON)}	--	--	1.3	V
Input Voltage (OFF) at V _O = -5 V, I _O = -0.1 mA	-V _{I(OFF)}	0.5	--	--	V
Transition Frequency at V _O = -10 V, I _O = -5 mA	f _T	--	250	--	MHz



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Typical Characteristic Curves





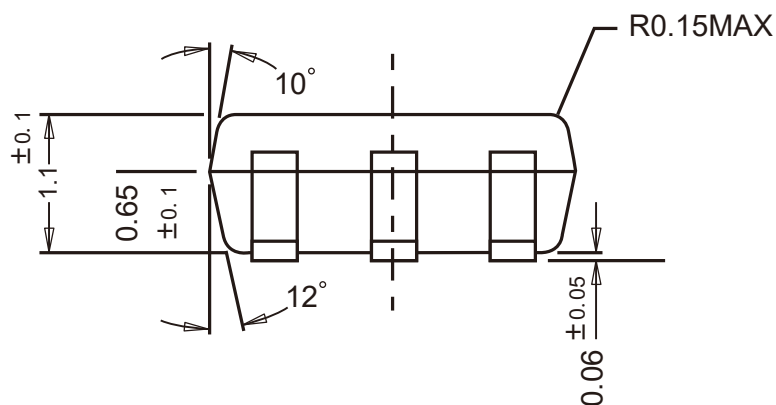
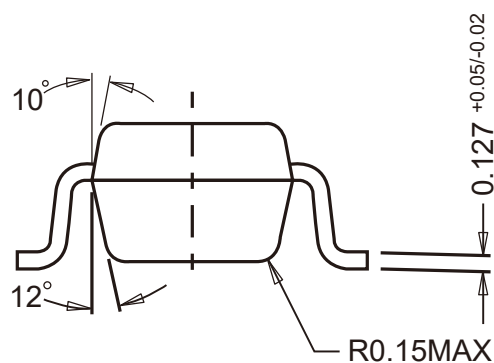
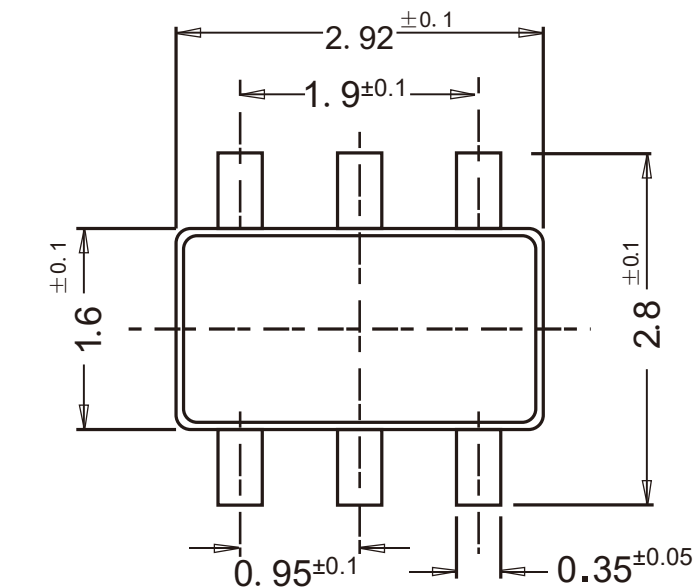
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Package Outline

SOT-23-6

Dimensions in mm



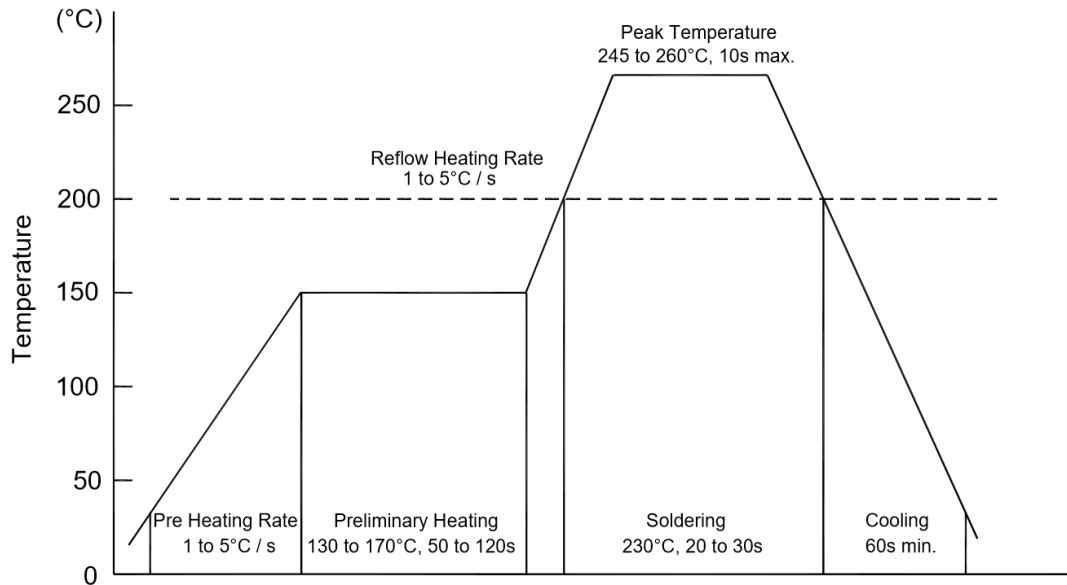
Ordering Information

Device	Package	Shipping
MMDTA143Z	SOT-23-6	3,000PCS/Reel&7inches



Conditions of Soldering and Storage

◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

◆ Conditions of hand soldering

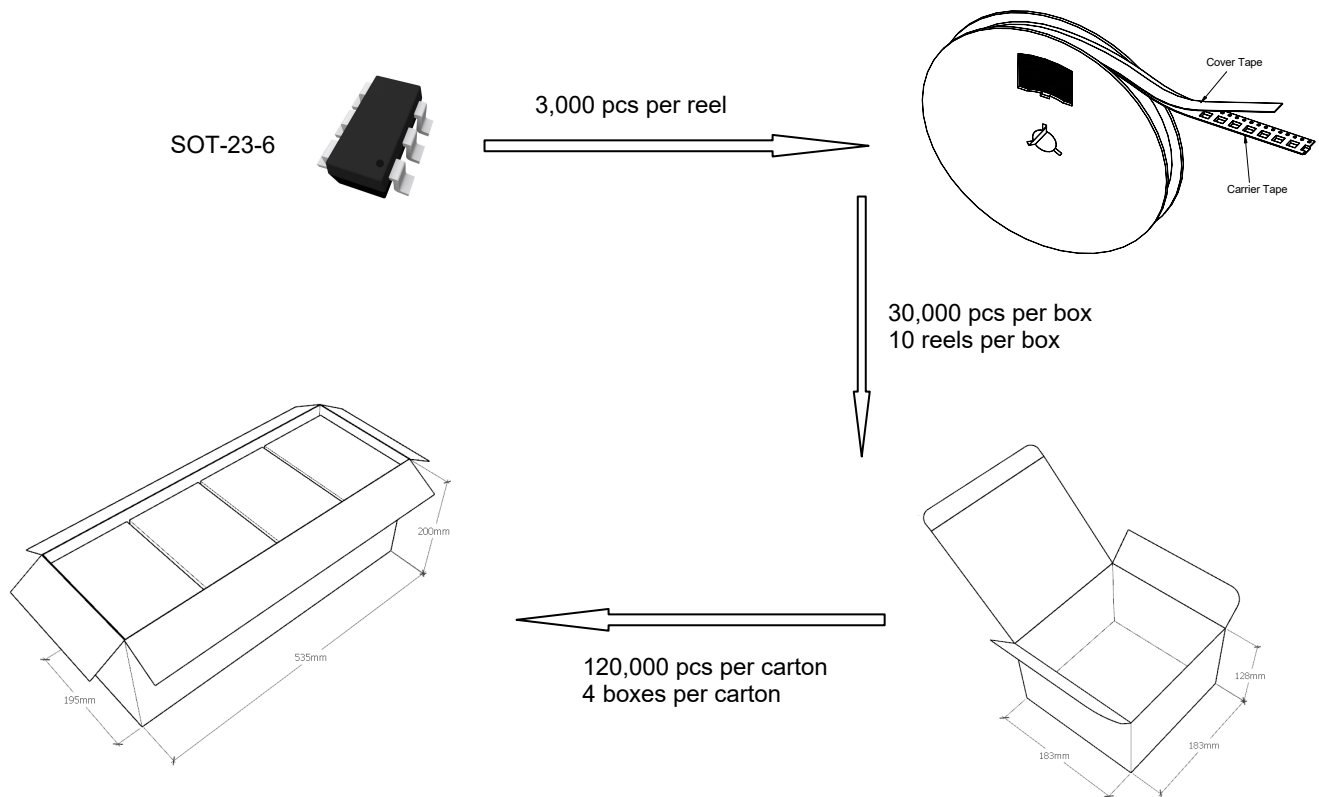
- Temperature: 370 °C
- Time: 3s max.
- Times: one time

◆ Storage conditions

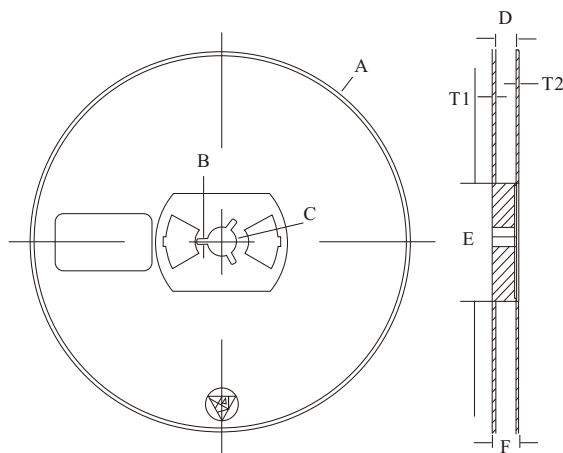
- **Temperature**
5 to 40 °C
- **Humidity**
30 to 80% RH
- **Recommended period**
One year after manufacturing

Package Specifications

- The method of packaging

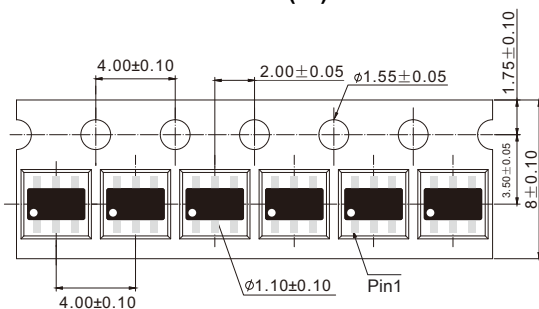


◆ Embossed tape and reel data



Symbol	Value (unit: mm)
A	Ø 177.8±1
B	2.7±0.2
C	Ø 13.5±0.2
E	Ø 54.5±0.2
F	12.3±0.3
D	9.6+2/-0.3
T1	1.0±0.2
T2	1.2±0.2

Reel (7")



Tape (8mm)