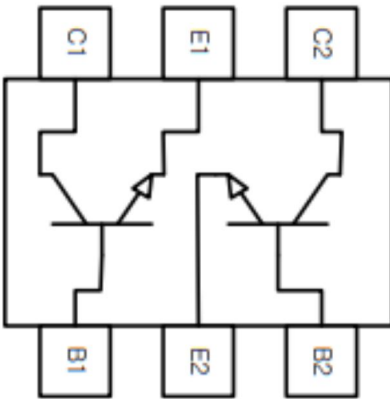


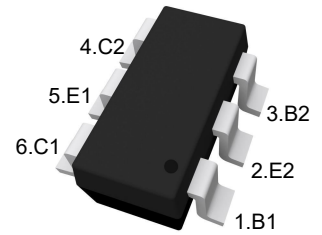
### Features

- For switching and amplifier applications

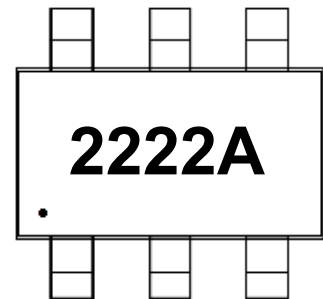
### Equivalent Circuit



### SOT-23-6



### Marking Code



### Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	75	V
Collector Emitter Voltage	$V_{CEO}$	40	V
Emitter Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	600	mA
Maximum Power Dissipation	$P_D$	1	W
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C

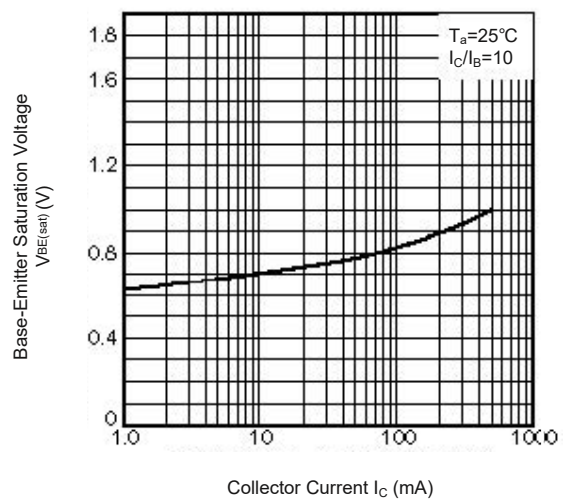
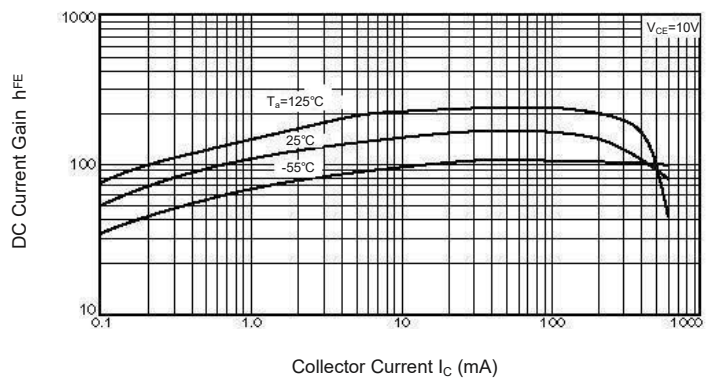
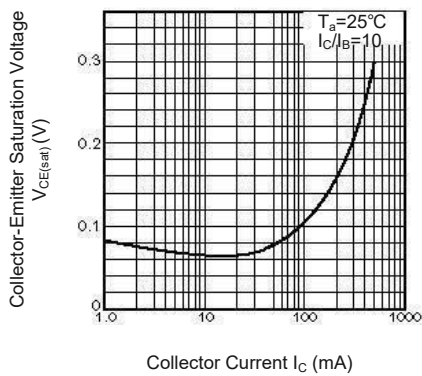
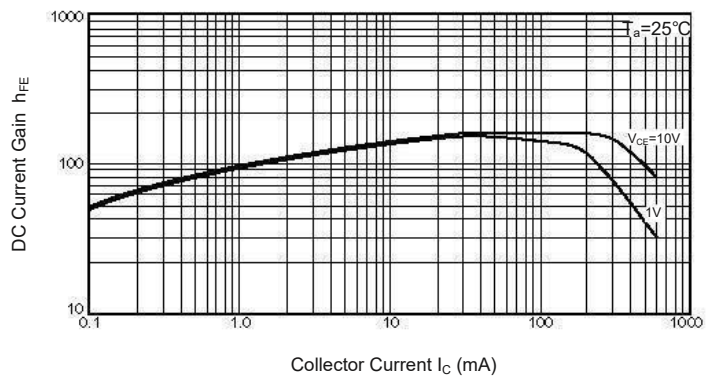
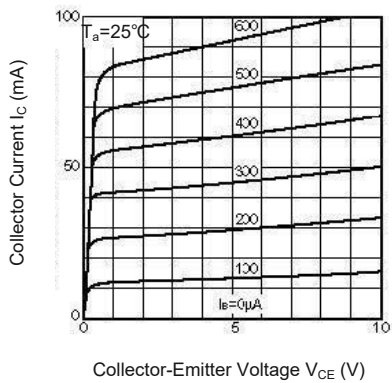


### Electrical Characteristics (T<sub>A</sub>=25°C)

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 0.1 mA at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 1 mA at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 10 mA at V <sub>CE</sub> = 1 V, I <sub>C</sub> = 150 mA at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 150 mA at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 500 mA	H <sub>FE</sub>	35 50 75 50 100 40	-- -- -- -- 300. --	--
Collector Base Cutoff Current at V <sub>CB</sub> = 60 V	I <sub>CBO</sub>	--	10	nA
Emitter Base Cutoff Current at V <sub>EB</sub> = 3 V	I <sub>EBO</sub>	--	100	nA
Collector Base Breakdown Voltage at I <sub>C</sub> = 10 μA	V <sub>(BR)CBO</sub>	75	--	V
Collector Emitter Breakdown Voltage at I <sub>C</sub> = 10 mA	V <sub>(BR)CEO</sub>	40	--	V
Emitter Base Breakdown Voltage at I <sub>E</sub> = 10 μA	V <sub>(BR)EBO</sub>	6	--	V
Collector Emitter Saturation Voltage at I <sub>C</sub> = 150 mA, I <sub>B</sub> = 15 mA at I <sub>C</sub> = 500 mA, I <sub>B</sub> = 50 mA	V <sub>CE(sat)</sub>	-- --	0.3 1.0	V
Base Emitter Saturation Voltage at I <sub>C</sub> = 150 mA, I <sub>B</sub> = 15 mA at I <sub>C</sub> = 500 mA, I <sub>B</sub> = 50 mA	V <sub>BE(sat)</sub>	0.6 --	1.2 2.0	V
Transition Frequency at V <sub>CE</sub> = 20 V, I <sub>E</sub> = -20 mA, f = 100 MHz	F <sub>T</sub>	300	--	MHz
Output Capacitance at V <sub>CB</sub> = 10 V, f = 100 KHz	C <sub>ob</sub>	--	8	pF



### Typical Characteristic Curves





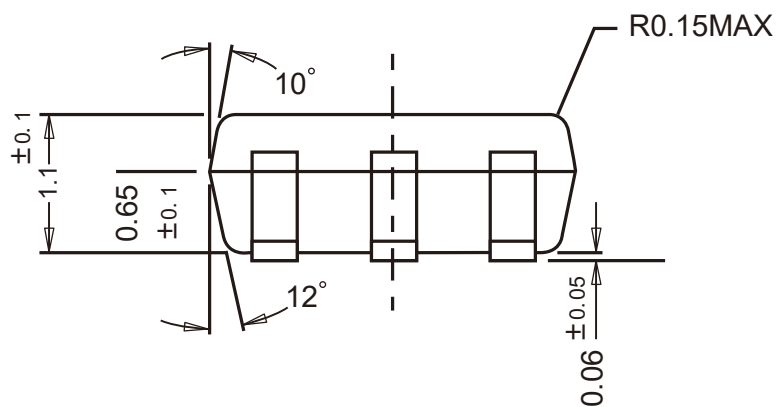
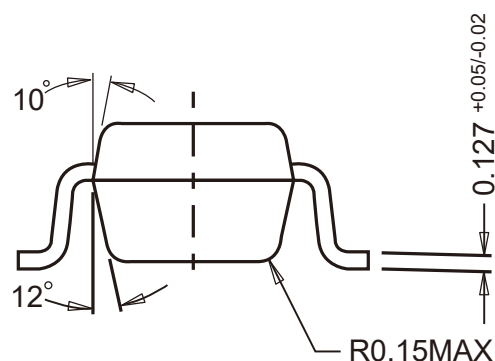
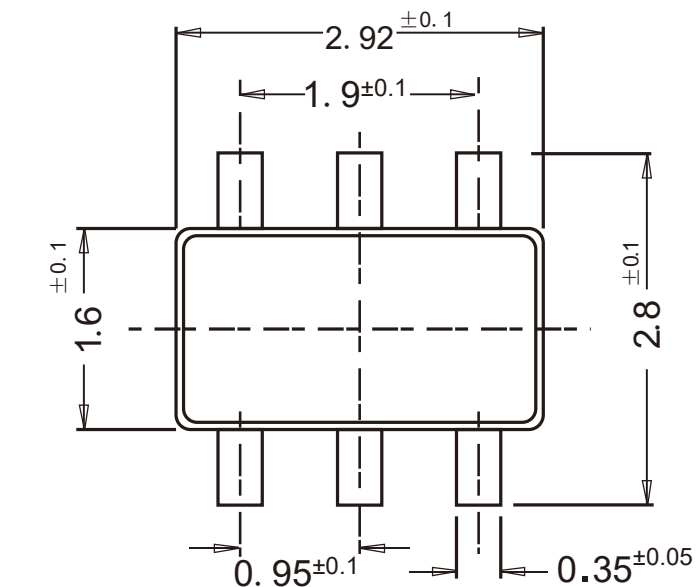
# MMDT2222ASG

## Double NPN Transistors

### Package Outline

SOT-23-6

Dimensions in mm



### Ordering Information

Device	Package	Shipping
MMDT2222ASG	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

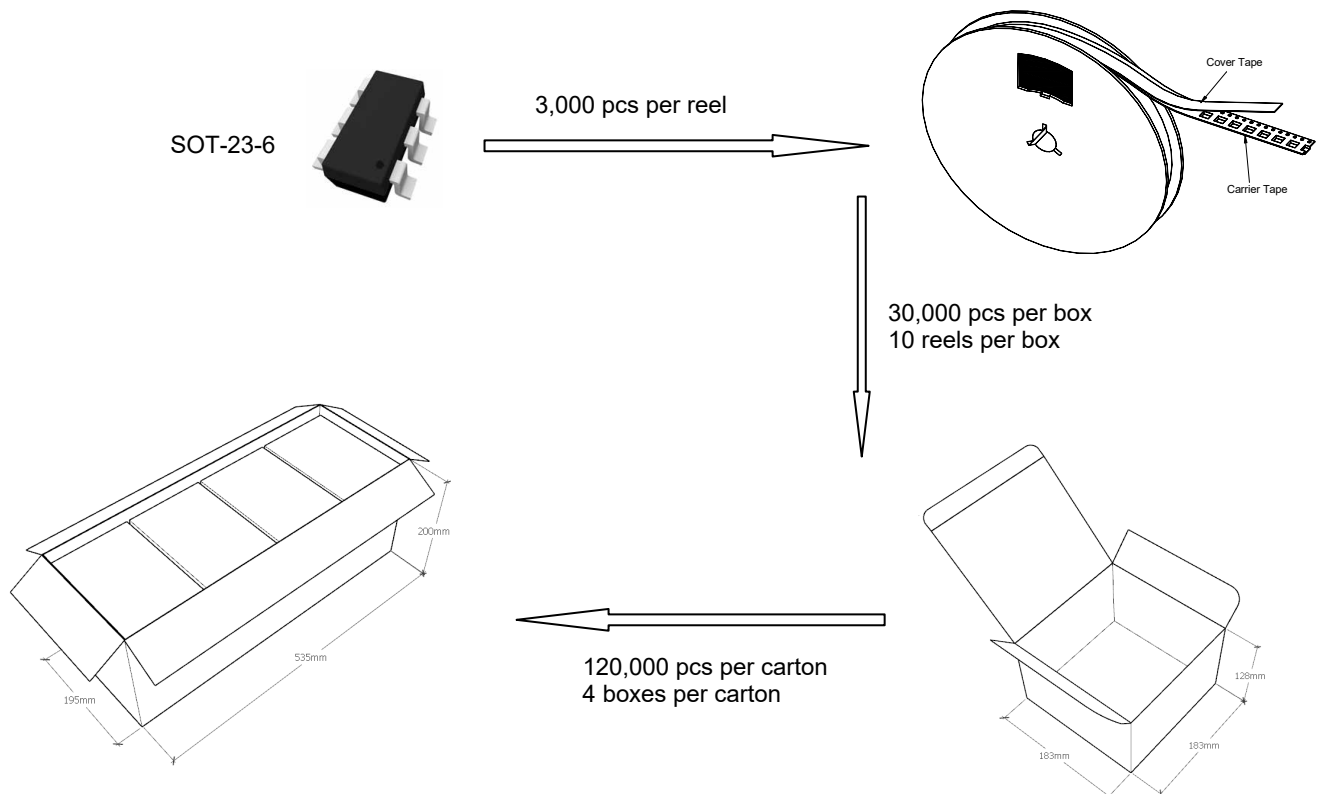
- Temperature: 370 °C
- Time: 3s max.
- Times: one time

#### ◆ Storage conditions

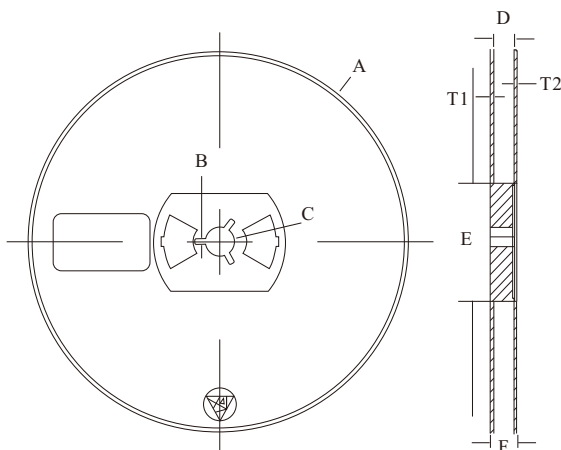
- **Temperature**  
5 to 40 °C
- **Humidity**  
30 to 80% RH
- **Recommended period**  
One year after manufacturing

### Package Specifications

- The method of packaging

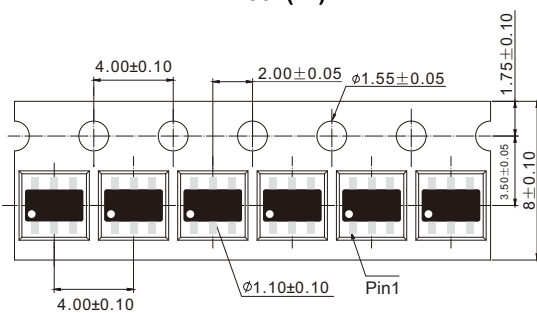


### ◆ Embossed tape and reel data



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)