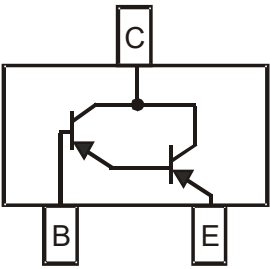


MMBTA63 MMBTA64 PNP Darlington Transistor

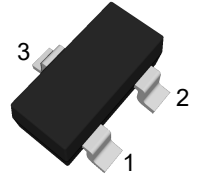
Features

- RoHS and Reach Compliant
- Halogen and Antimony Free
- Moisture Sensitivity Level 1

Equivalent Circuit



SOT-23

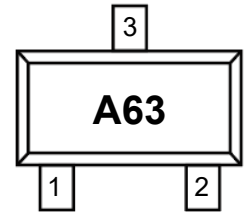


(Top View)

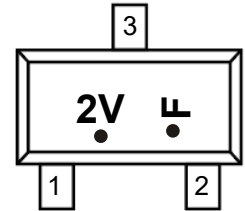
1.Base 2.Emitter 3.Collector

Marking Code :

MMBTA63



MMBTA64



Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	30	V
Collector Emitter Voltage	$-V_{CEO}$	30	V
Emitter Base Voltage	$-V_{EBO}$	10	V
Collector Current	$-I_C$	500	mA
Maximum Power Dissipation	P_D	300	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C



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Electrical Characteristics

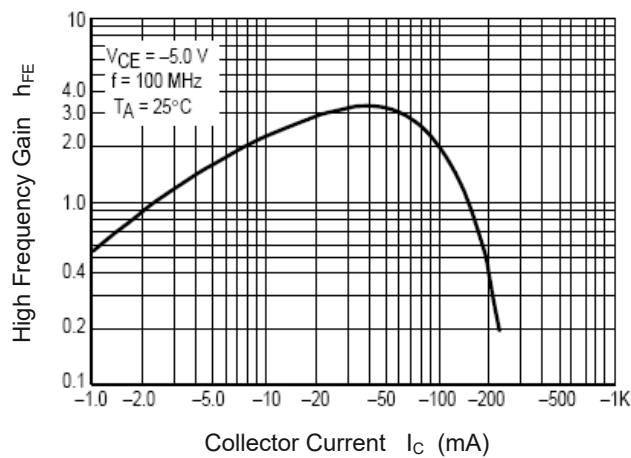
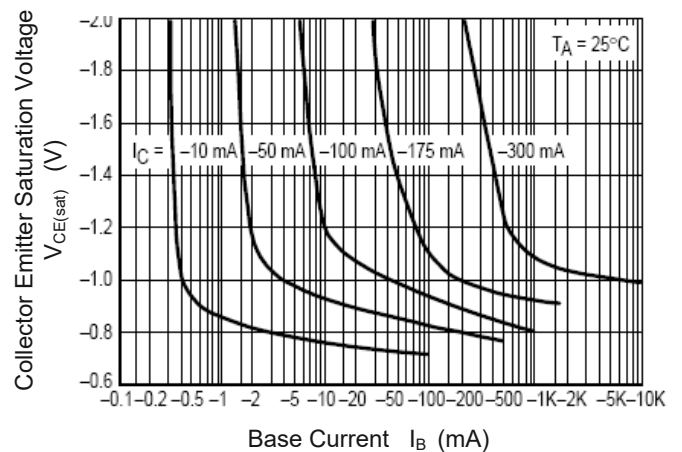
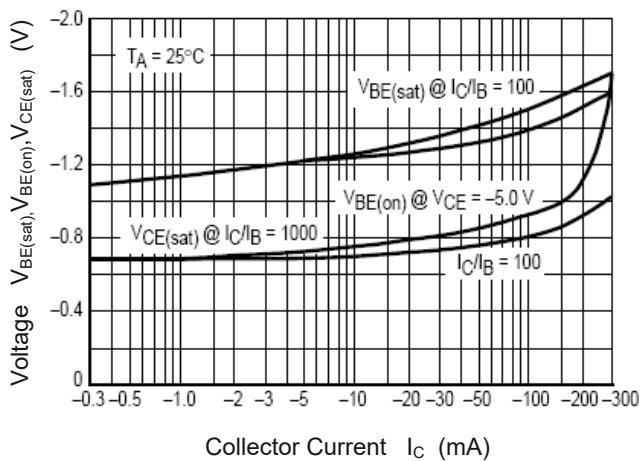
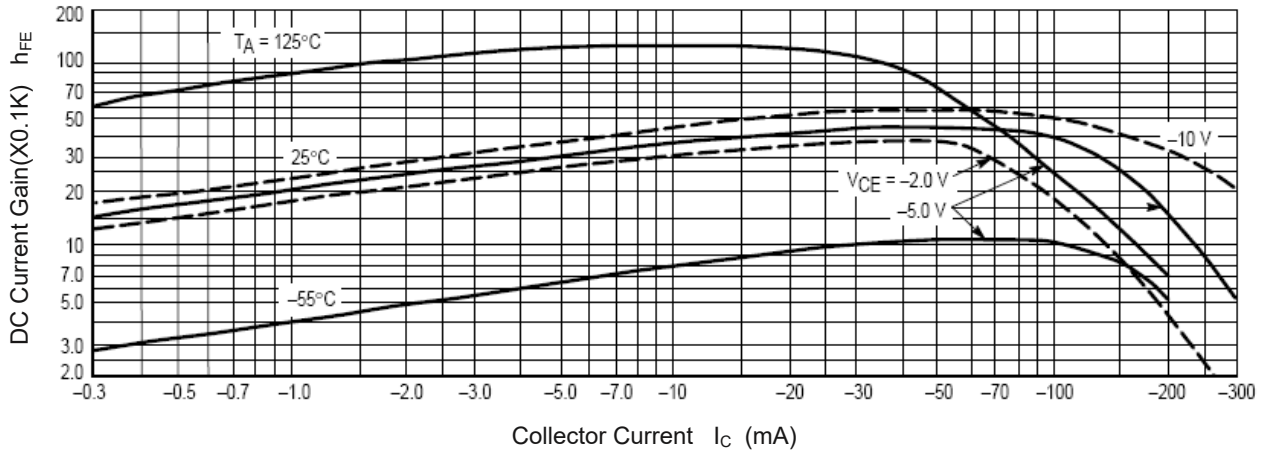
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = -5\text{ V}$, $I_C = -10\text{ mA}$	MMBTA63 H_{FE}	5000	--	--
	MMBTA64	10000	--	--
at $V_{CE} = -5\text{ V}$, $I_C = -100\text{ mA}$	MMBTA63	10000	--	--
	MMBTA64	20000	--	--
Collector Base Cutoff Current at $V_{CB} = -30\text{ V}$	$-I_{CBO}$	--	100	nA
Emitter Base Cutoff Current at $V_{EB} = -10\text{ V}$	$-I_{EBO}$	--	100	nA
Collector Base Breakdown Voltage at $I_C = -100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	30	--	V
Collector Emitter Breakdown Voltage at $I_C = -1\text{ mA}$	$-V_{(BR)CEO}$	30	--	V
Emitter Base Breakdown Voltage at $I_E = -100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	10	--	V
Collector Emitter Saturation Voltage at $I_C = -100\text{ mA}$, $I_B = -0.1\text{ mA}$	$-V_{CE(sat)}$	--	1.5	V
Base Emitter On Voltage at $V_{CE} = -5\text{ V}$, $I_C = -100\text{ mA}$	$-V_{BE(on)}$	--	2	V
Transition Frequency at $V_{CE} = -5\text{ V}$, $I_C = -10\text{ mA}$, $f = 100\text{ MHz}$	F_T	125	--	MHz



MMBTA63 MMBTA64 PNP Darlington Transistor

Typical Characteristic Curves



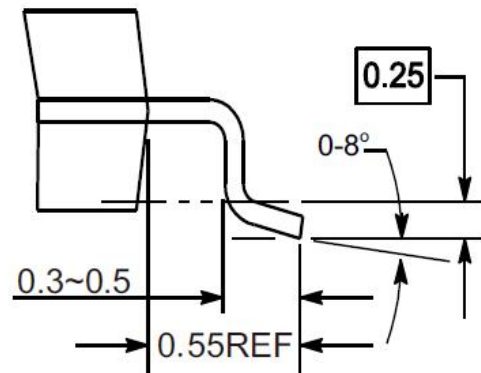
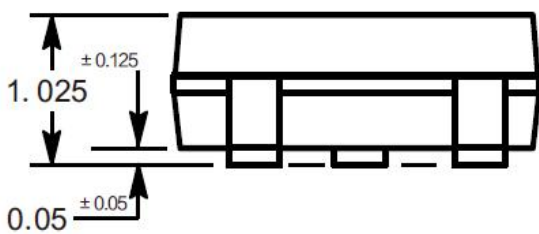
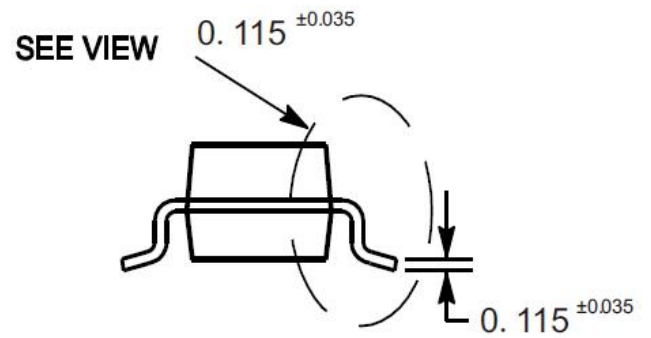
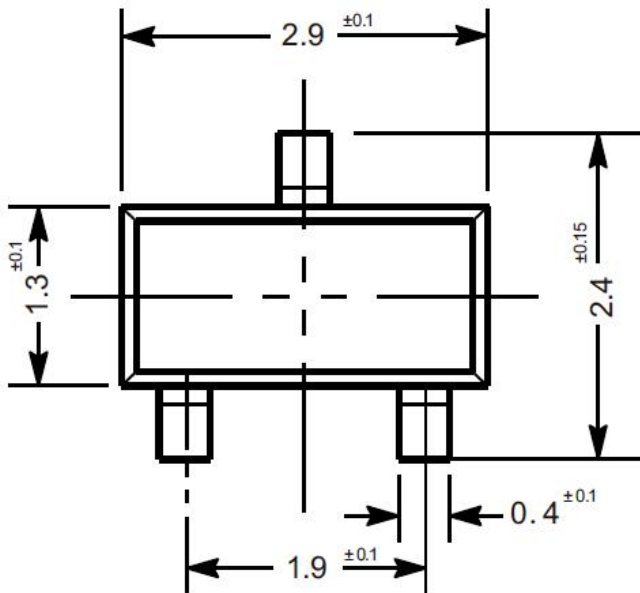


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Package Outline

SOT-23

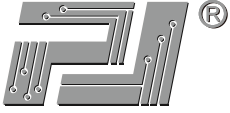
Dimensions in mm



VIEW C

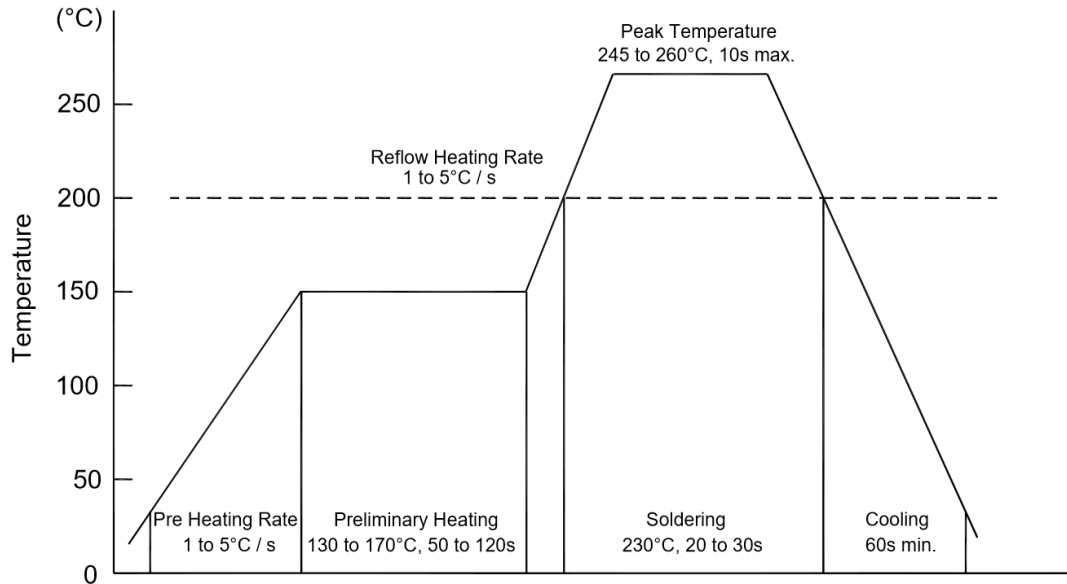
Ordering Information

Device	Package	Shipping
MMBTA63,MMBTA64	SOT-23	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:

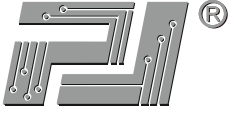
- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

◆ Conditions of hand soldering

- Temperature: 300°C
- Time: 3s max.
- Times: one time

◆ Storage conditions

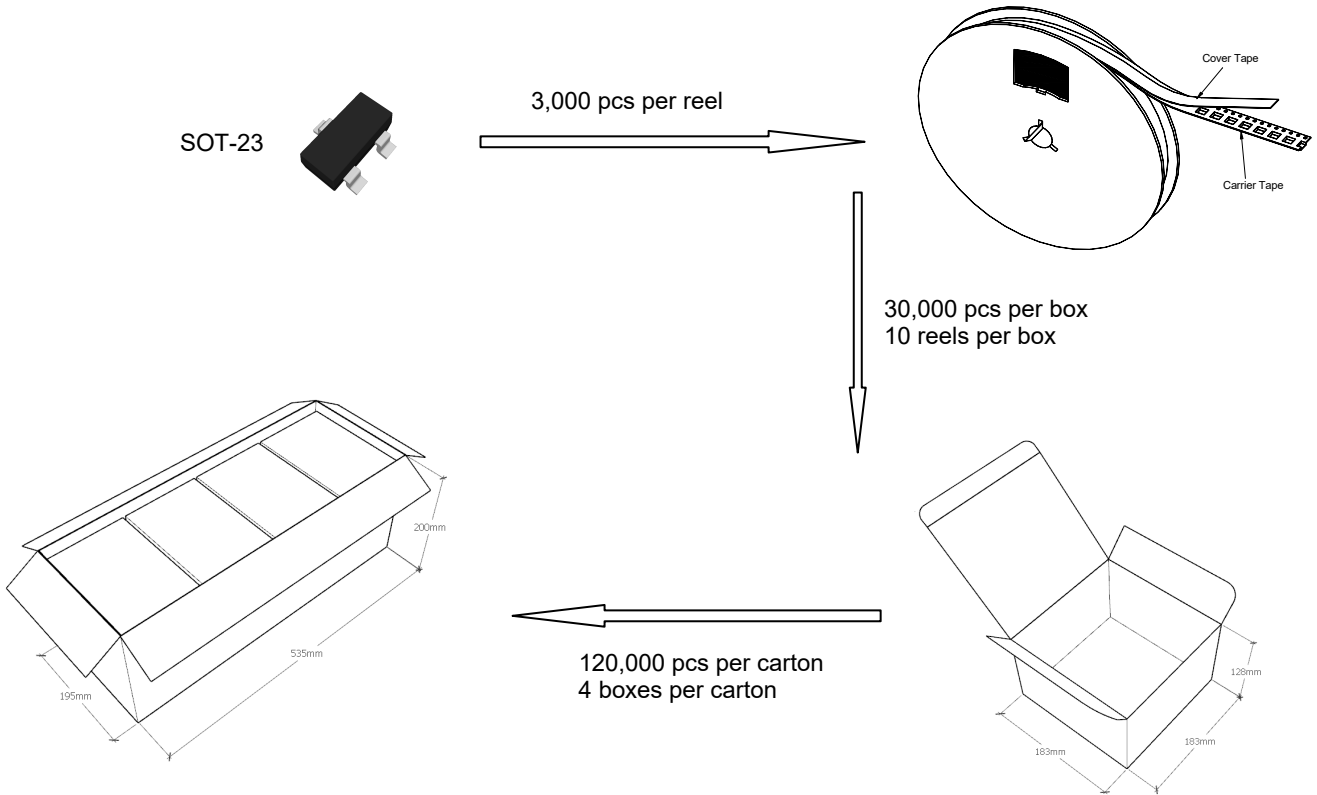
- **Temperature**
5 to 40°C
- **Humidity**
30 to 80% RH
- **Recommended period**
One year after manufacturing



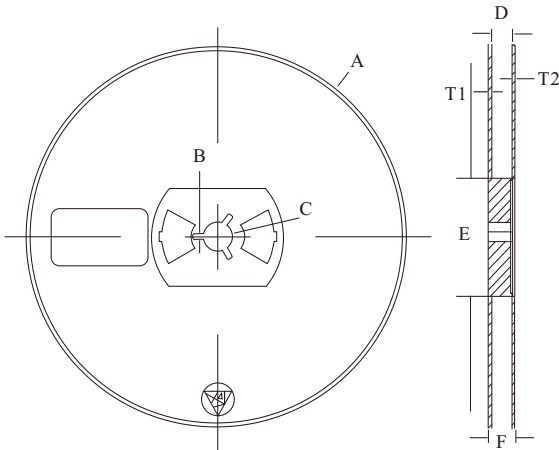
MMBTA63 MMBTA64 PNP Darlington Transistor

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")

