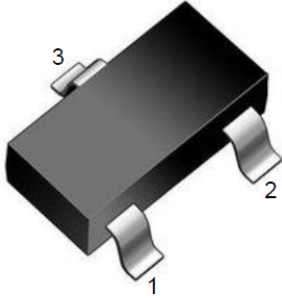


PNP Darlington Transistor

SOT-23



- 1、 Base
2、 Emitter
3、 Collector

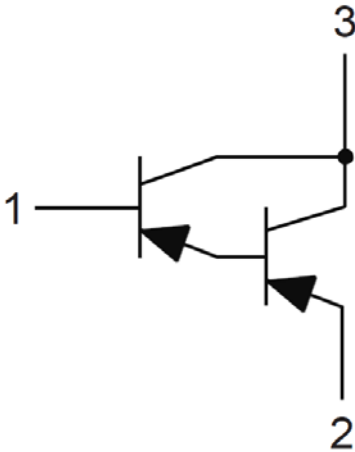
Features

- We declare that the material of product compliance with RoHS requirements and Halogen Free
- Surface mount package ideally suited for automatic insertion
- Moisture Sensitivity Level 1
- High Current Gain

Mechanical Data

- **Package:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 2V

■ Equivalent Circuit





■ Maximum Ratings (Ta=25°C Unless otherwise specified)

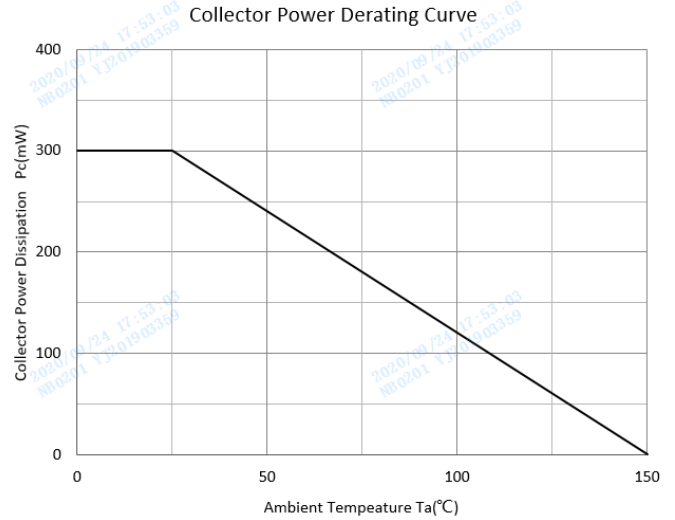
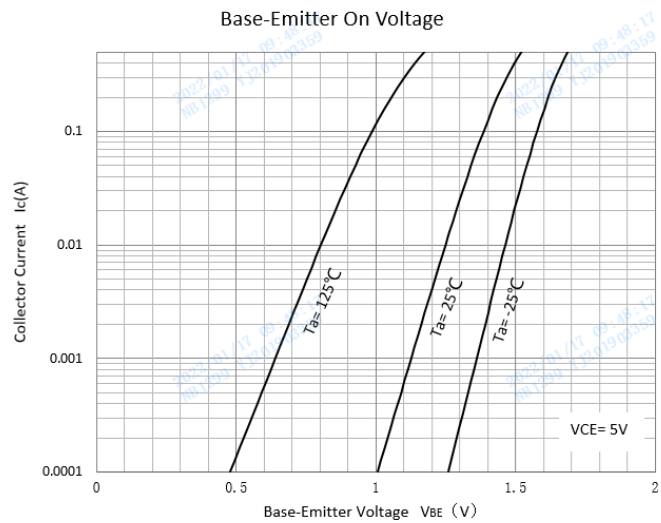
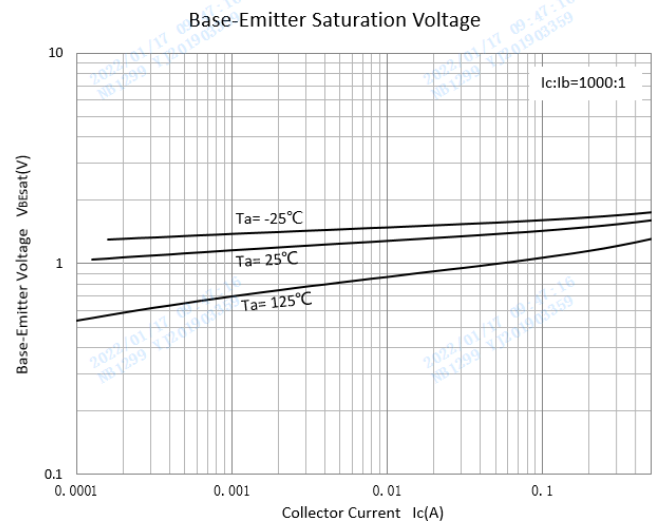
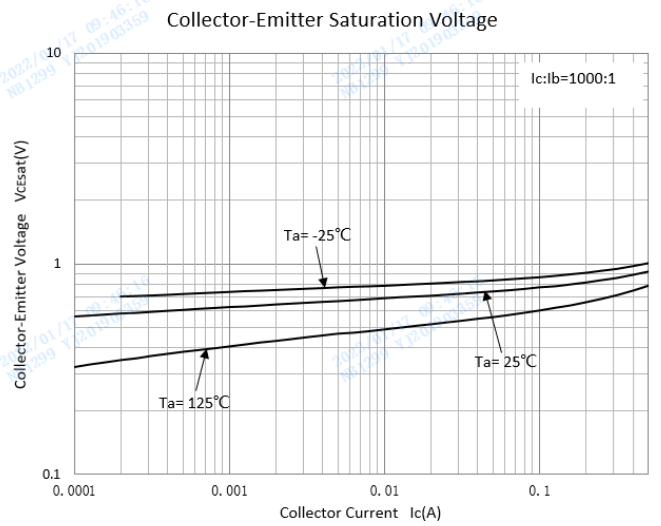
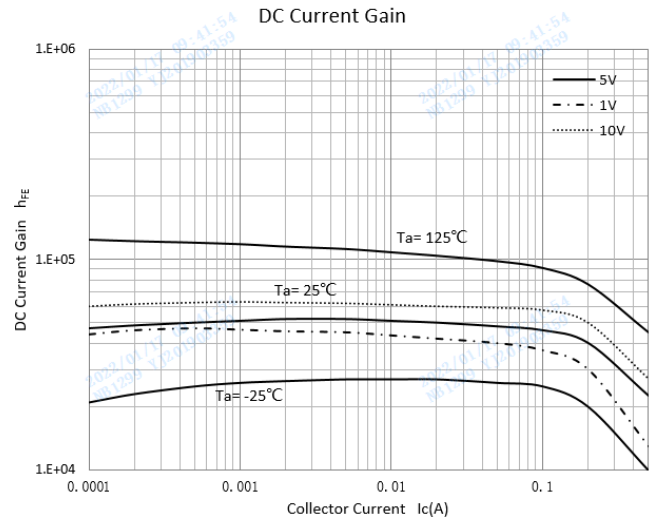
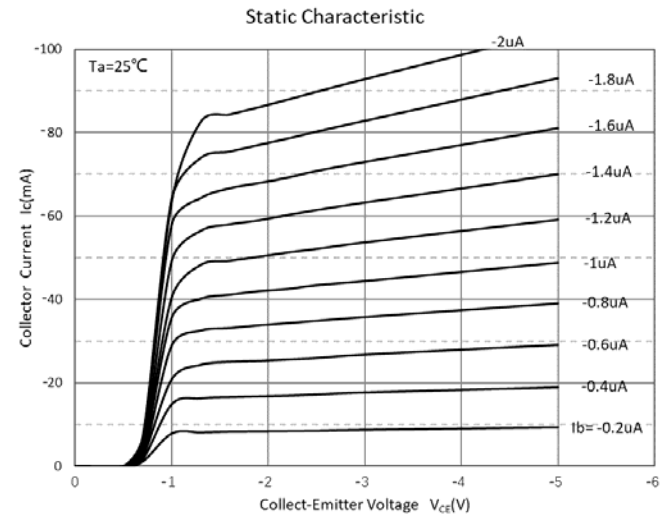
Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	$V_{(BR)CBO}$	V	IC=-100μA,IE=0	-30
Collector-Emitter Voltage	$V_{(BR)CEO}$	V	IC=-100μA,IB=0	-30
Emitter-Base Voltage	$V_{(BR)EBO}$	V	IE=-100μA,IC=0	-10
Collector Current -Continuous	IC	A		-0.5
Total Device Dissipation	PD	mW		300
Thermal resistance, junction-to-ambient	RθJA	°C/W		417
Junction Temperature	Tj	°C		-55 to +150
Storage Temperature	TSTG	°C		-55 to +150

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Type	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	IC=-100μA,IE=0	-30		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	IC=-100μA,IB=0	-30		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	IE=-100μA,IC=0	-10		
Collector cut-off current	I_{CBO}	uA	V _{CB} =-30 V ,IE=0			-0.1
Emitter cut-off current	I_{EBO}	uA	V _{EB} =-10 V , IC=0			-0.1
DC current gain	h_{FE1}		V _{CE} =-5V,IC=-10mA	10000		
	h_{FE2}		V _{CE} =-5V,IC=-100mA	20000		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=-100mA,IB=-0.1mA			-1.5
Base-emitter saturation voltage	$V_{BE(sat)}$	V	IC=-100mA,IB=-0.1mA			-2
Base-emitter voltage	V_{BEon}	V	V _{CE} =-5V,IC=-100mA			-2
Transition frequency	f _T	MHz	V _{CE} =- 5V, IC=-10mA,f=100MHz	125		



Electrical Characteristics (Typical)





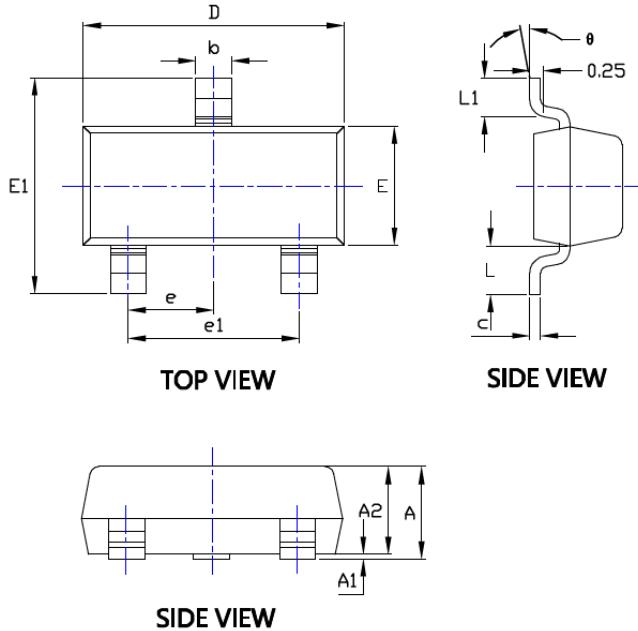
MMBTA64

RoHS
COMPLIANT

■ Ordering Information (Example)

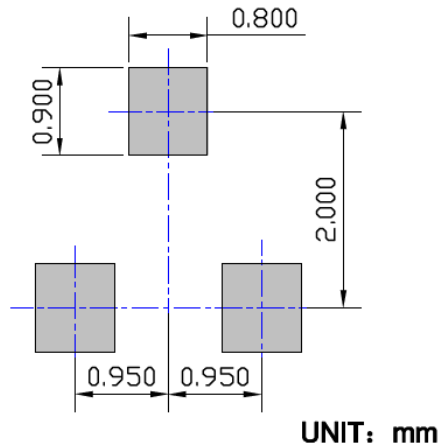
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBTA64	F2	Approximate 0.008	3000	30000	120000	7" reel

■ SOT-23 Package Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
theta	0°	8°	0°	8°

■ SOT-23 Soldering Footprint



UNIT: mm



Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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