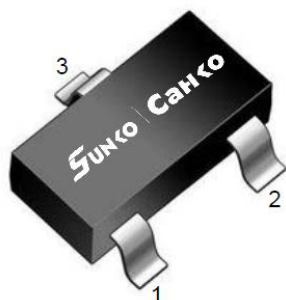


PNP Darlington Transistor

SOT-23



- 1、Base
- 2、Emitter
- 3、Collector

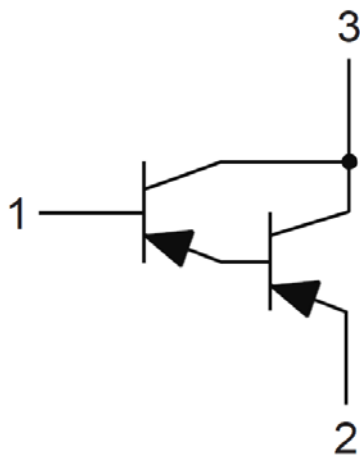
Features

- We declare that the material of product compliance with 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



MMBTA64

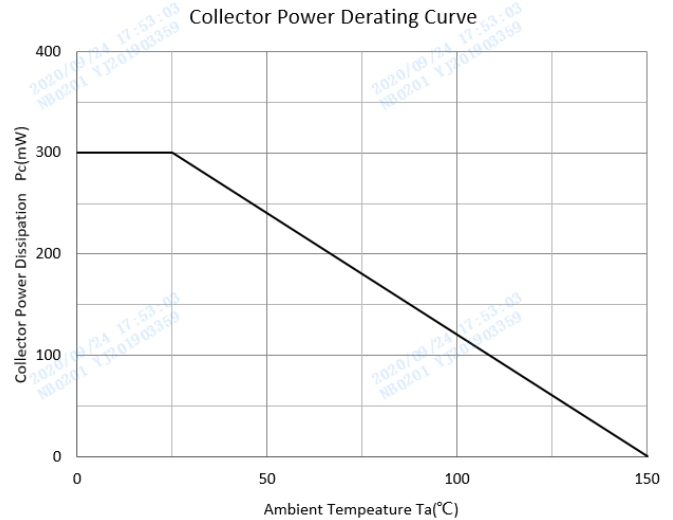
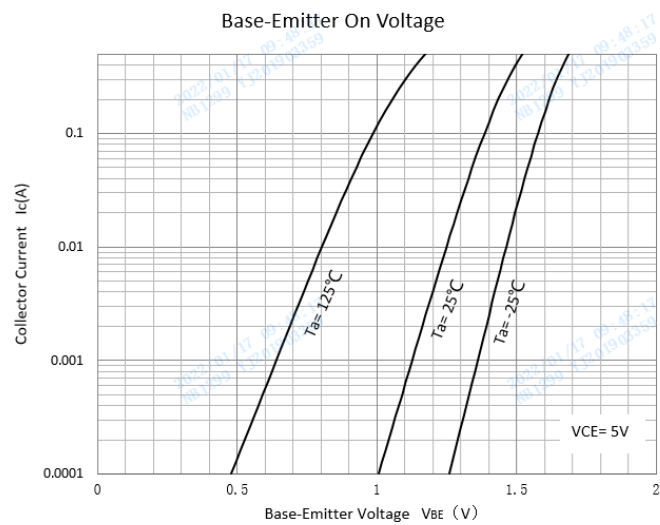
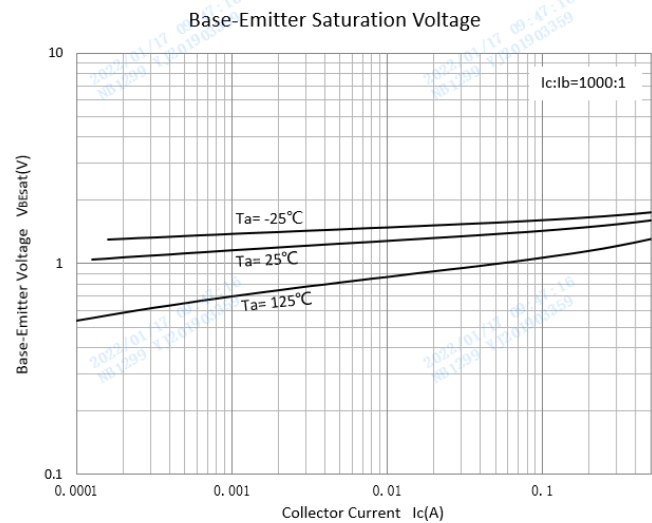
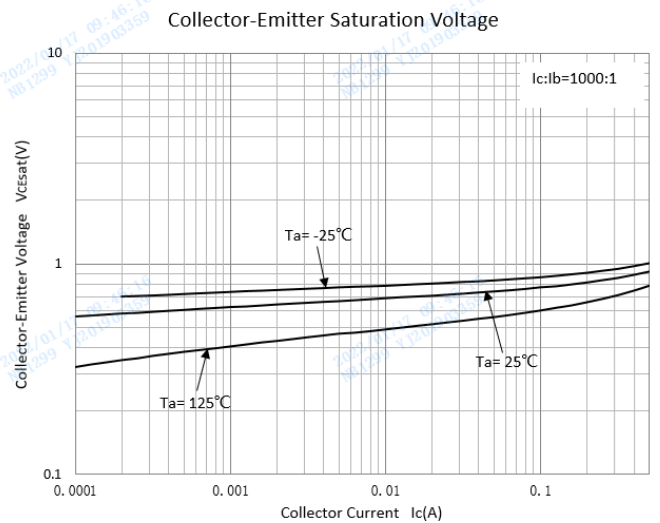
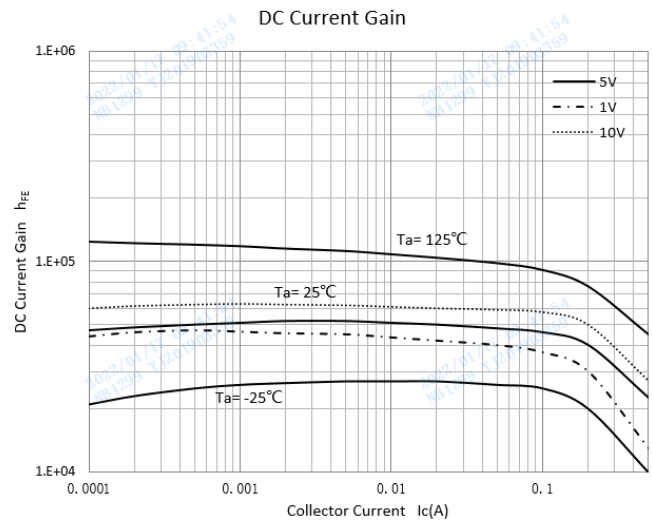
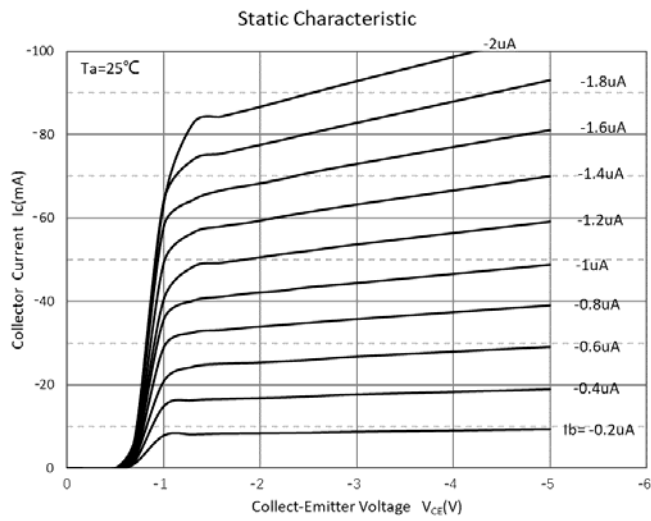
■ Maximum Ratings (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	$V_{(BR)CBO}$	V	$I_C = -100\mu A, I_E = 0$	-30
Collector-Emitter Voltage	$V_{(BR)CEO}$	V	$I_C = -100\mu A, I_B = 0$	-30
Emitter-Base Voltage	$V_{(BR)EBO}$	V	$I_E = -100\mu A, I_C = 0$	-10
Collector Current -Continuous	I_C	A		-0.5
Total Device Dissipation	PD	mW		300
Thermal resistance, junction-to-ambient	$R_{\theta JA}$	°C/W		417
Junction Temperature	T_J	°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	$I_C = -100\mu A, I_E = 0$	-30		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C = -100\mu A, I_B = 0$	-30		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E = -100\mu A, I_C = 0$	-10		
Collector cut-off current	I_{CBO}	uA	$V_{CB} = -30 V, I_E = 0$			-0.1
Emitter cut-off current	I_{EBO}	uA	$V_{EB} = -10 V, I_C = 0$			-0.1
DC current gain	h_{FE1}		$V_{CE} = -5V, I_C = -10mA$	10000		
	h_{FE2}		$V_{CE} = -5V, I_C = -100mA$	20000		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = -100mA, I_B = -0.1mA$			-1.5
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C = -100mA, I_B = -0.1mA$			-2
Base-emitter voltage	V_{BEon}	V	$V_{CE} = -5V, I_C = -100mA$			-2
Transition frequency	fT	MHz	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$	125		

■ Electrical Characteristics (Typical)

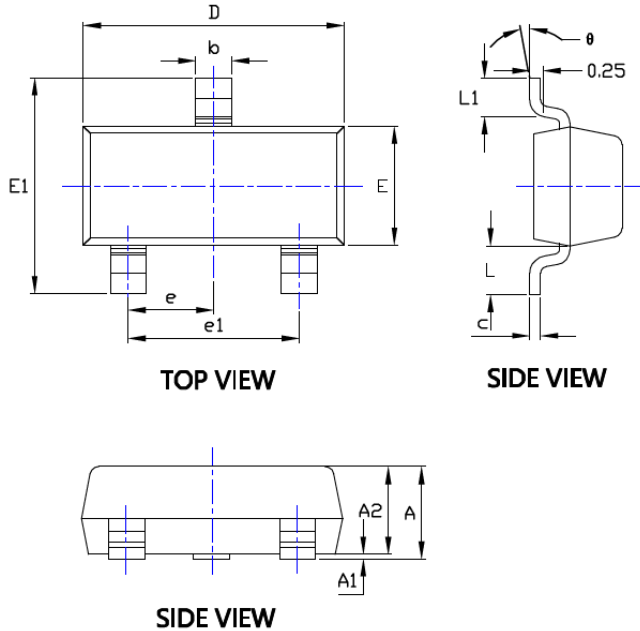


MMBTA64

■ Ordering Information (Example)

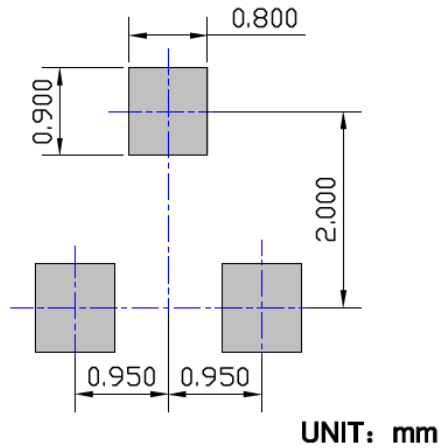
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBTA64	F2	Approximate 0.008	3000	30000	120000	7" reel

■ 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	0.037 TYP		0.950 TYP	
e1	0.071	0.079	1.800	2.000
L	0.022 REF		0.550 REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

■ SOT-23 Soldering Footprint



Disclaimer

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