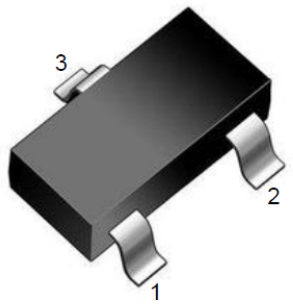
PNP Darlington Transistor

SOT-23



1、Base
2、Emitter
3、Collector

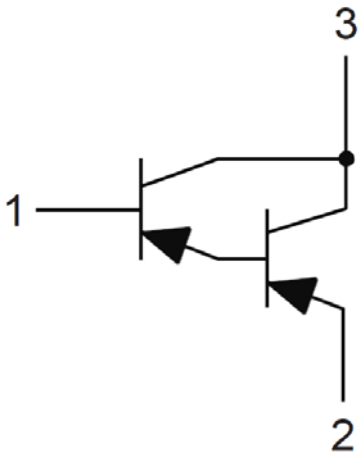
Features

- 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



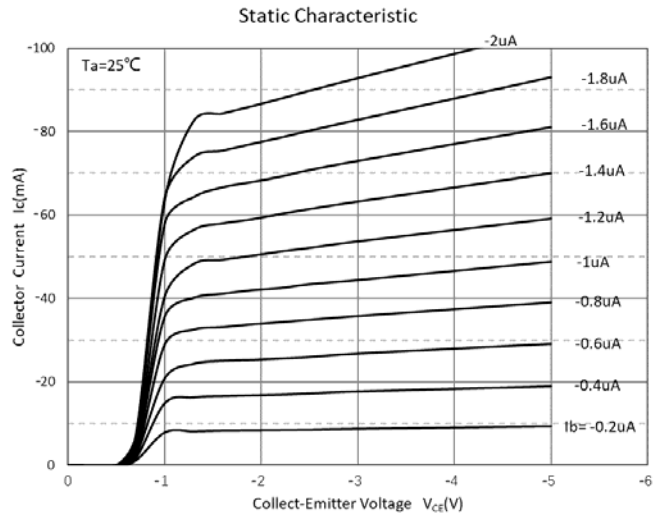
■ Maximum Ratings (Ta=25℃ Unless otherwise specified)

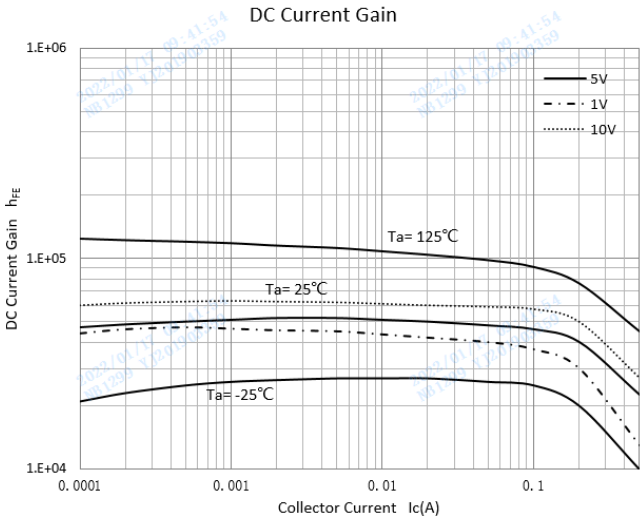
Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	$V_{(BR)CBO}$	V	IC=-100μA,IE=0	-30
Collector-Emitter Voltage	$V_{(BR)CEO}$	V	IC =-100μA,IB=0	-30
Emitter-Base Voltage	$V_{(BR)EBO}$	V	IE=-100μA,IC=0	-10
Collector Current -Continuous	IC	A		-0.5
Total Device Dissipation	PD	mW		300
Thermal resistance,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

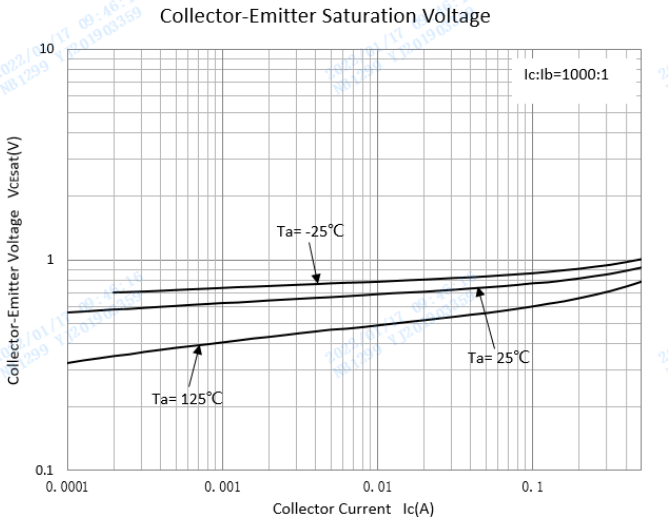
■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

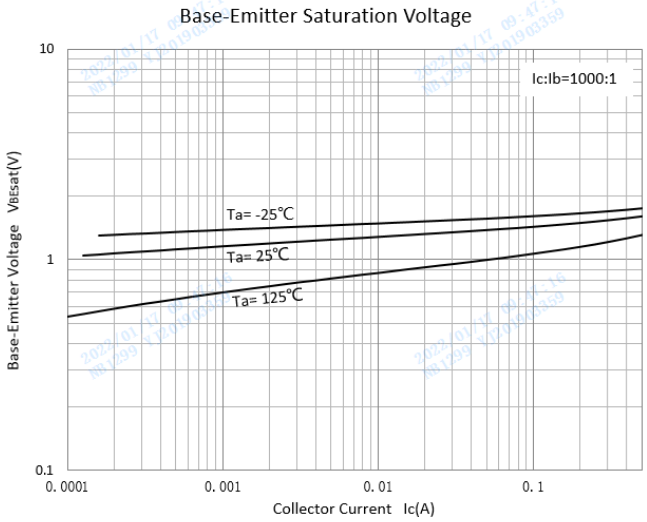
Item	Symbol	Unit	Conditions	Min	Type	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	IC=-100μA,IE=0	-30		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	IC =-100μA,IB=0	-30		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	IE=-100μA,IC=0	-10		
Collector cut-off current	I_{CBO}	uA	V_{CB}=-30 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}		VCE=-5V,IC=-10mA	10000		
	h_{FE2}		VCE=-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	VCE=-5V,IC=-100mA			-2
Transition frequency	fT	MHz	VCE=- 5V, IC=-10mA,f=100MHz	125		

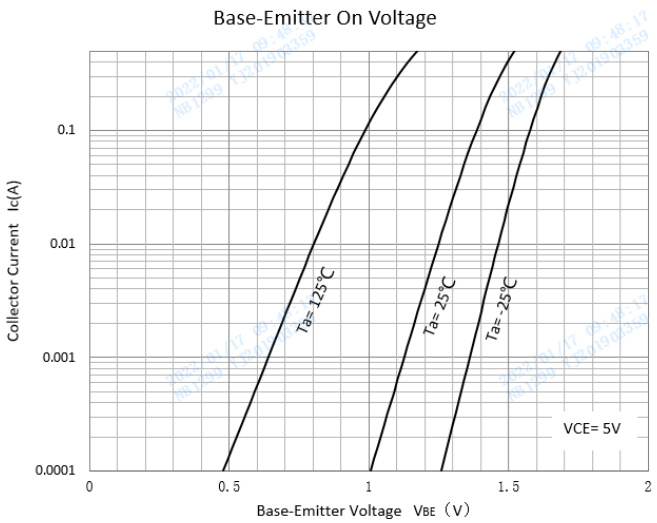
■ Electrical Characteristics (Typical)

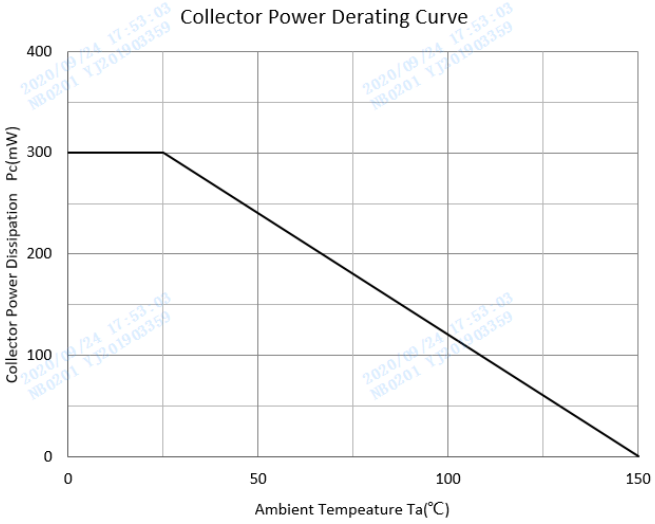








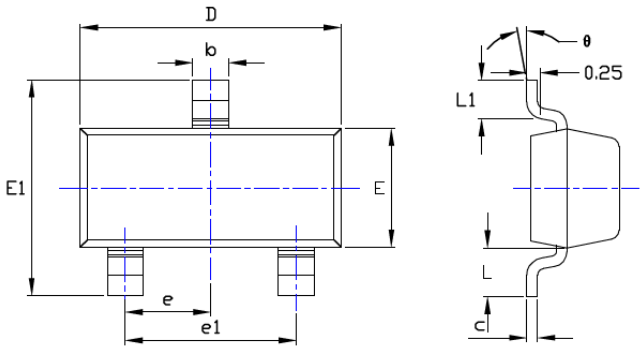




■ Ordering Information (Example)

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



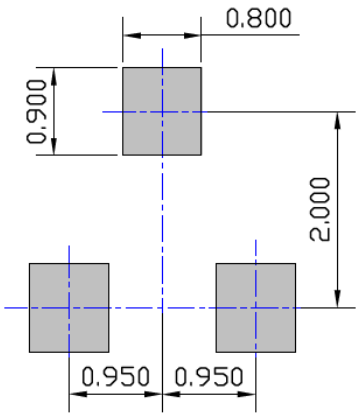
TOP VIEW

SIDE VIEW

SIDE VIEW

DIMENSIONS				
SYMBOL	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
θ	0°	8°	0°	8°

■SOT-23 Soldering Footprint



UNIT：mm

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