

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Transistor Diode
SOT-23

SOT-23

SPECIFICATION

67B	BC807__xx	ST23	E03
Type	Type	Package	Packing
67B: Transistor Diode	BC807-16	SOT23	E03: tape and Reel(embossed tape)for 3k pc (7'REEL)
	BC807-25		
	BC807-40		

All products according to RoHS (2015/863/EU)

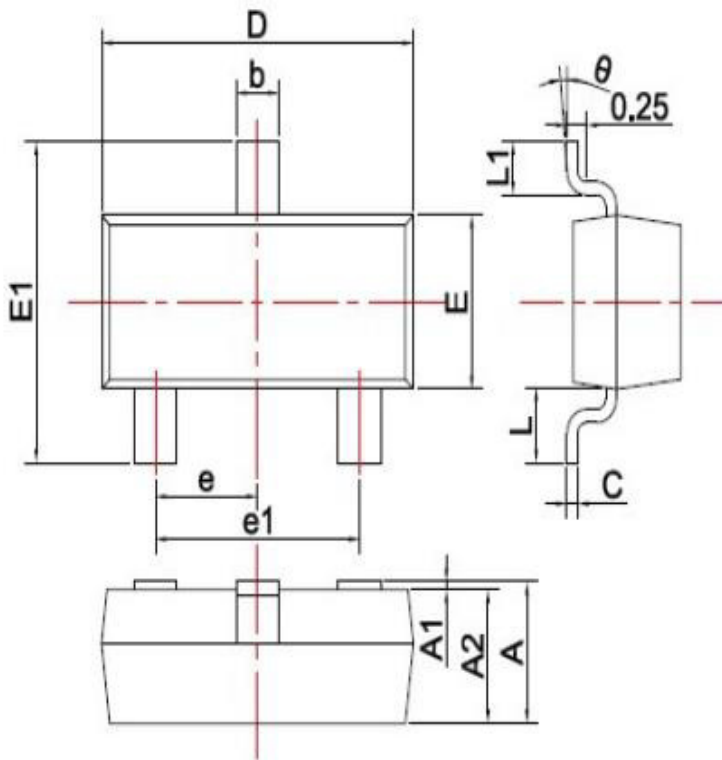
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SOT-23

PACKAGE OUTLINE



DIMENSIONS



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.000
A1	0.000	0.100
A2	0.900	1.000
b	0.300	0.400
c	0.080	0.100
D	2.800	3.000
E	1.200	1.300
E1	2.250	2.400
e	0.950TY	
e1	1.800	2.000
L	0.550RE	
L1	0.300	0.400
θ	0°	8°

Unit:

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Maximum Ratings & Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Maximum Ratings & Electrical Characteristics (TA=25°C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	-50	V
Collector-Emitter Voltage	V _{CEO}	-45	V
Emitter -Base Voltage	V _{EBO}	-5	V
Collector Current-Continuous	I _C	-500	mA
Collector Power Dissipation	P _C	300	mW
Operating junction temperature range	T _J	150	°C
Storage temperature range	T _{STG}	-55 to +150	°C
Thermal Resistance from Junction to Ambient	R _{θJA}	417	°C/W

Electrical characteristics(Ta=25°C)

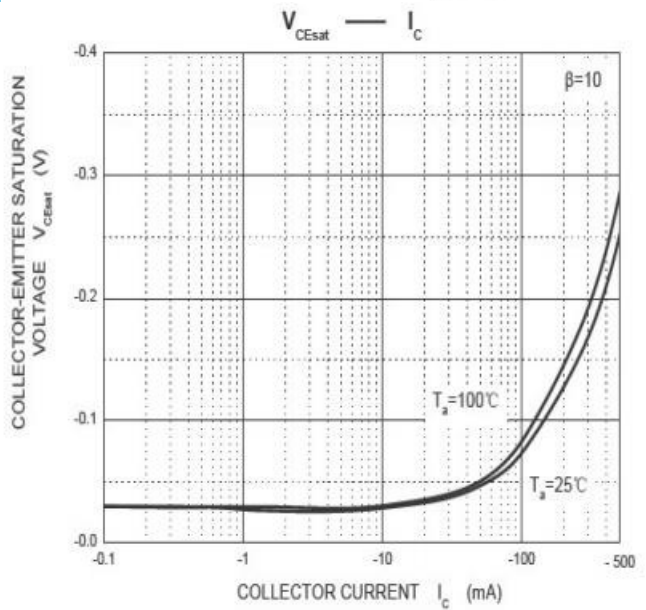
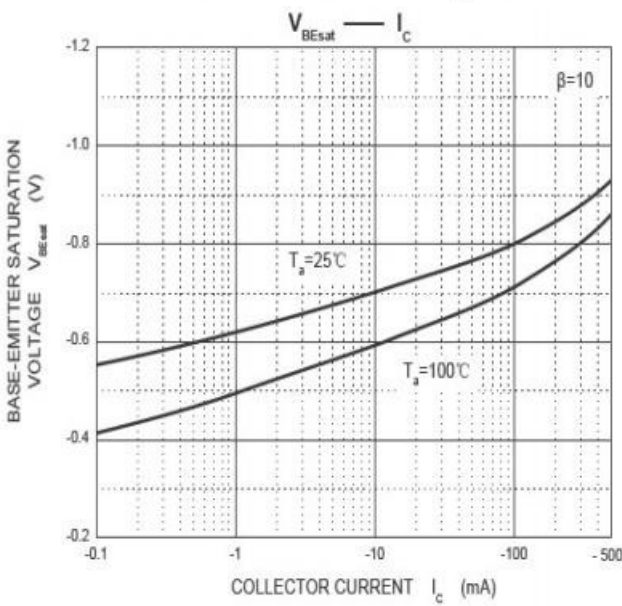
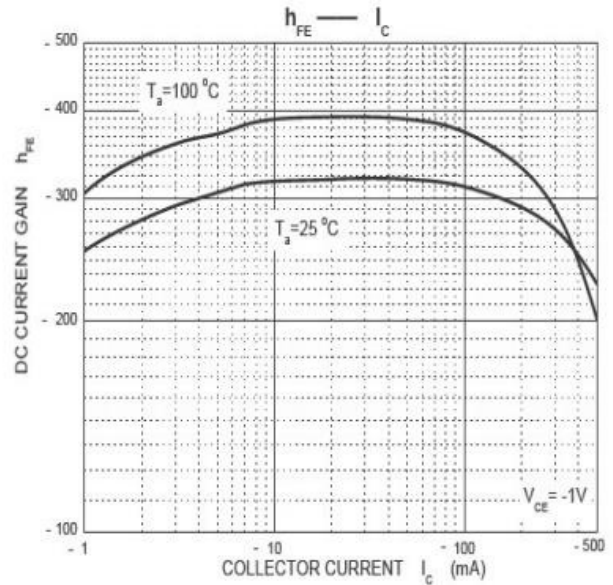
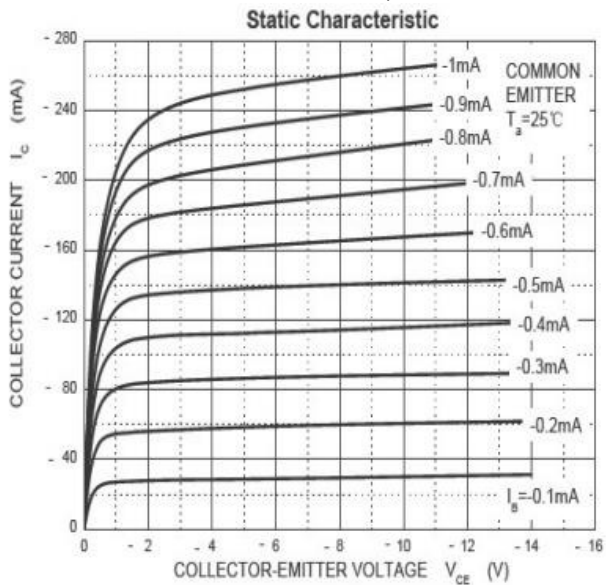
Electrical Specifications (TA=25°C unless otherwise noted)					
Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	-50		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-10A, I _B =0	-45		
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-1μA, I _C =0	-5		
Collector cut-off current	I _{CBO}	V _{CB} =-45 I _E =0		100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =-4V, I _C =0		100	nA
DC current gain	h _{FE(1)}	V _{CE} =-1V, I _C =-100mA	100	600	
	h _{FE(2)}	V _{CE} =-1V, I _C =-500mA	40		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-500mA, I _B =-50mA		-0,7	V
Base -emitter saturation voltage	V _{BE(sat)}	I _C =-500mA, I _B =-50mA		1,20	
Transition frequency	f _T	V _{CE} =-5V, I _C =10mA, f=100 MHz	100		MHz

Classification OF			
	h _{FE(1)}		
RANK	BC807-16	BC807-25	BC807-40
RANGE	100-250	160-400	250-600

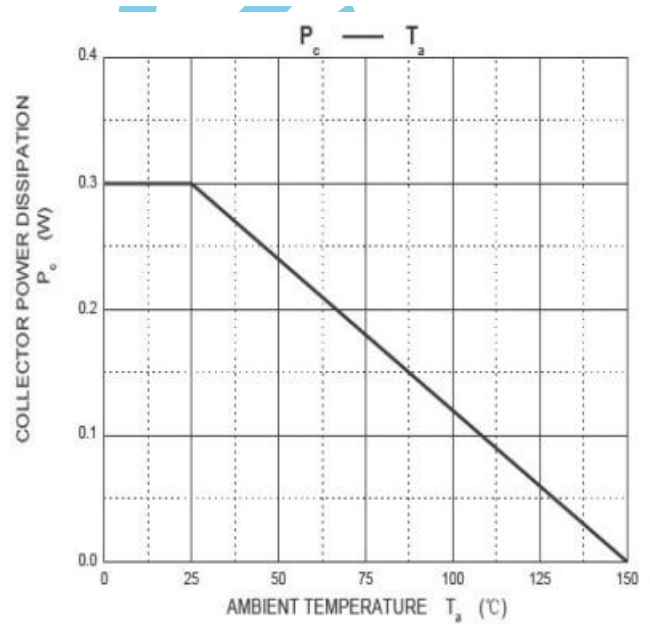
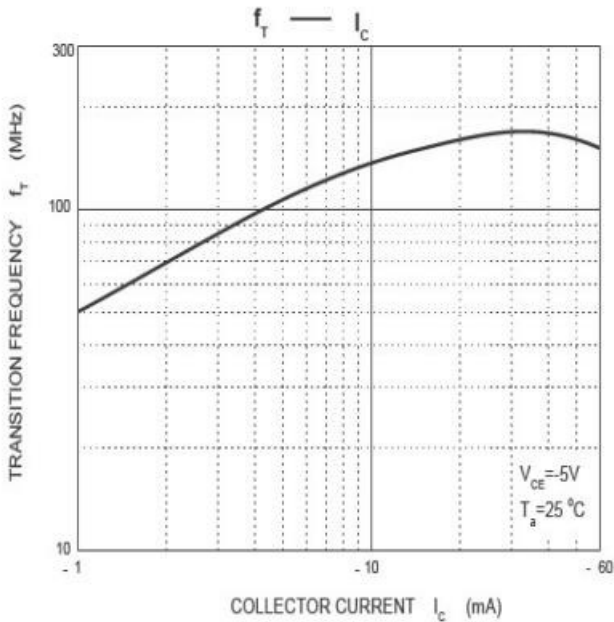
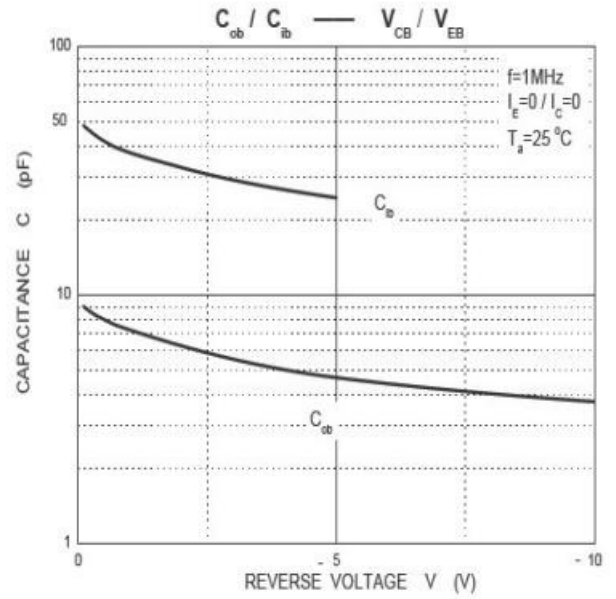
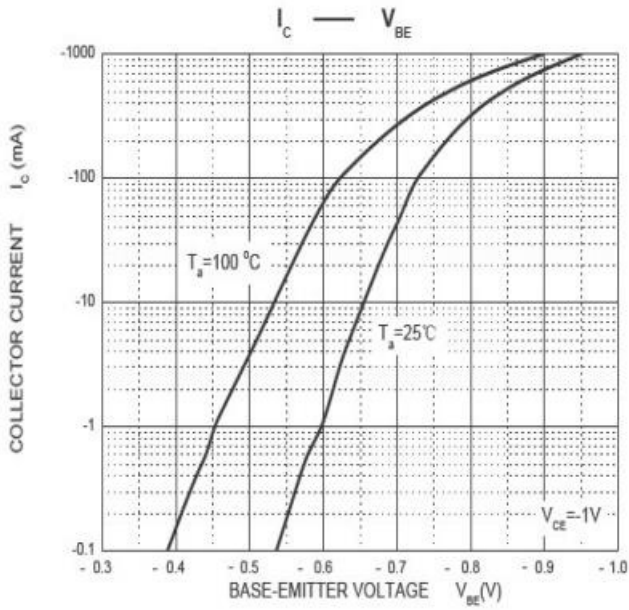
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Ratings and Characteristics Curves

($T_a = 25^\circ\text{C}$ unless otherwise noted)

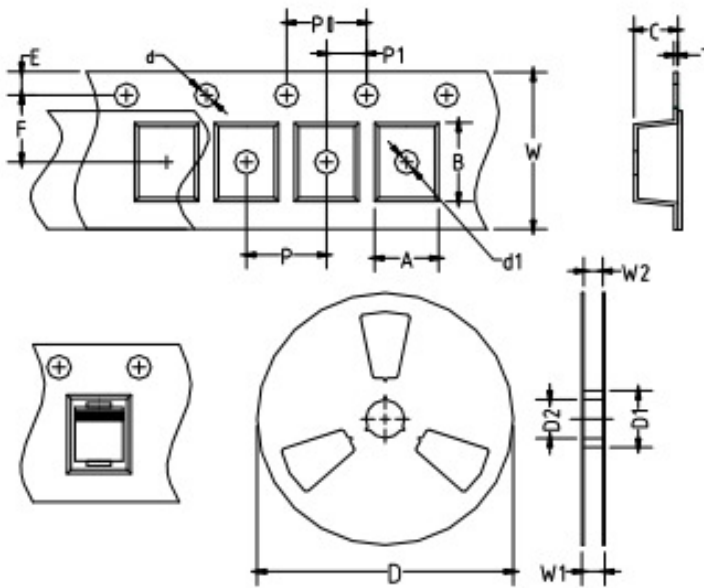


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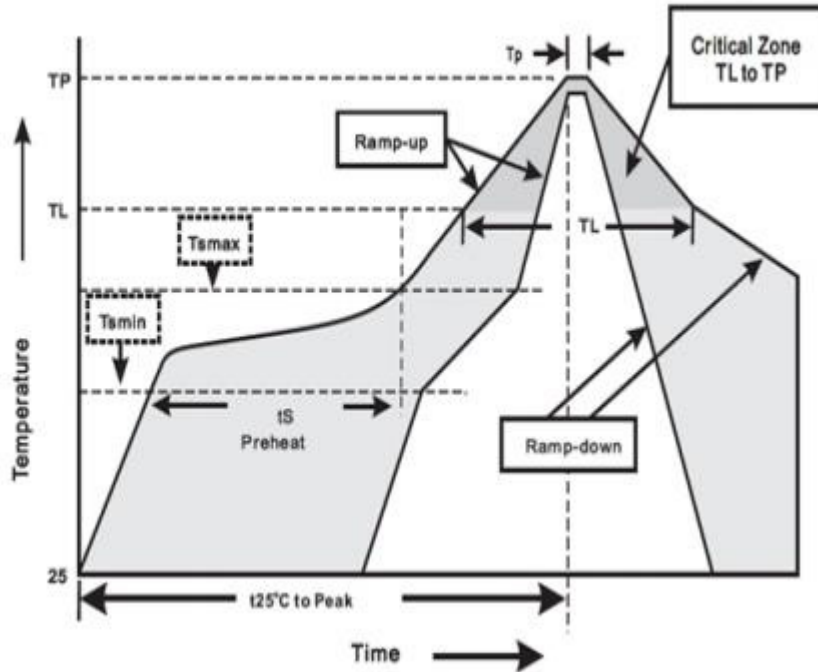
Size (Unit:mm)



Item	Symbol	SOT-23
Carrier width	A	3.15±0.10
Carrier length	B	2.77±0.10
Carrier depth	C	1.22±0.10
Sprocket hole	d	1.50±0.10
Carrier hole	d1	1.00±0.10
Reel outside diameter	D	177.8±1.0
Reel inner diameter	D1	50±1.0
Feed hole diameter	D2	13.0±1.0
Strocket hole position	E	1.75±0.10
Punch hole position	F	3.50±0.05
Punch hole pitch	P	4.00±0.10
Sprocket hole pitch	P0	4.00±0.10
Embossment center	P1	2.00±0.10
Total tape thickness	T	0.20±0.10
Tape width	W	7.95±0.15
Reel width	W1	11.4±1.5
Reel width	W2	9.4±1.0



Soldering Parameters



Stock period

The performance of these products, including the solderability, is guaranteed for 12 months, provided that they remain packed as they were when delivered and stored at a temperature of 0-35°C and a relative humidity 35-75%RH

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