

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Transistor Diode
SOT23

SOT23

SPECIFICATION

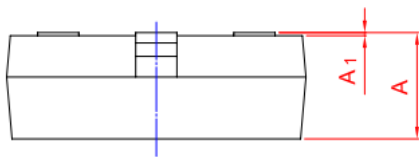
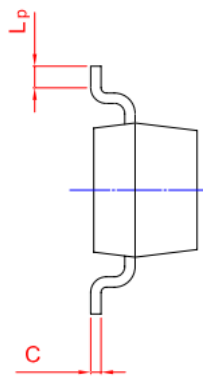
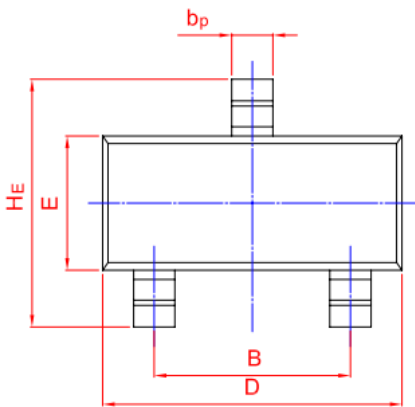
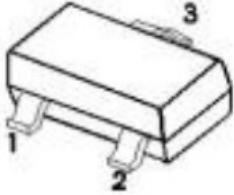
67D	BC80__xx	ST23	E03
Type	Type	Package	Packing
67D: Transistor Diode	BC807-16xx: BC807-16	ST23: SOT23	E03: Embossed tape and reel for 3k pc (7'REEL)
	BC807-25xx: BC807-25		
	BC807-40xx: BC807-40		
	BC807-16xx: BC808-16		
	BC807-25xx: BC808-25		
	BC807-40xx: BC808-40		

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

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PACKAGE OUTLINE



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20

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Absolute Maximum Ratings TA = 25°C unless otherwise noted

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

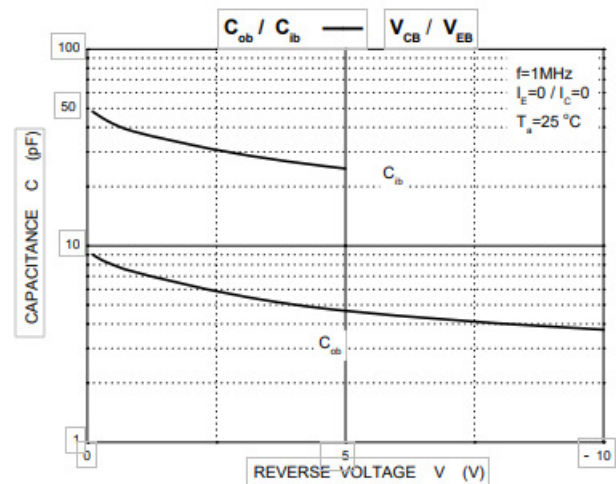
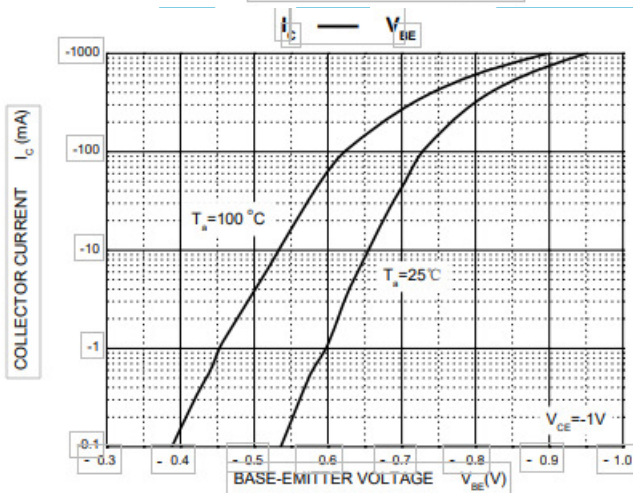
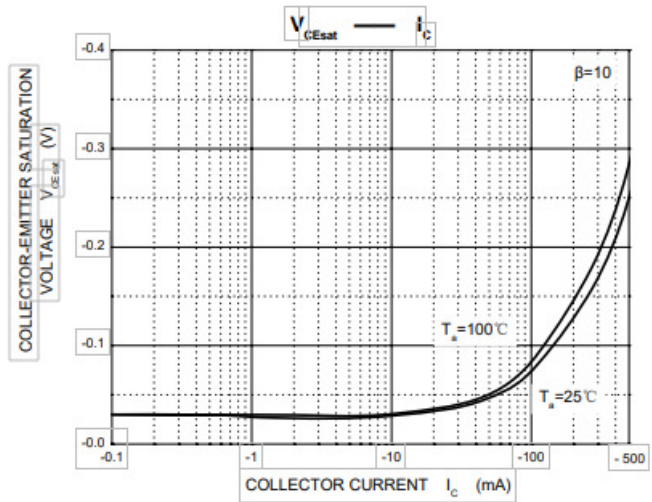
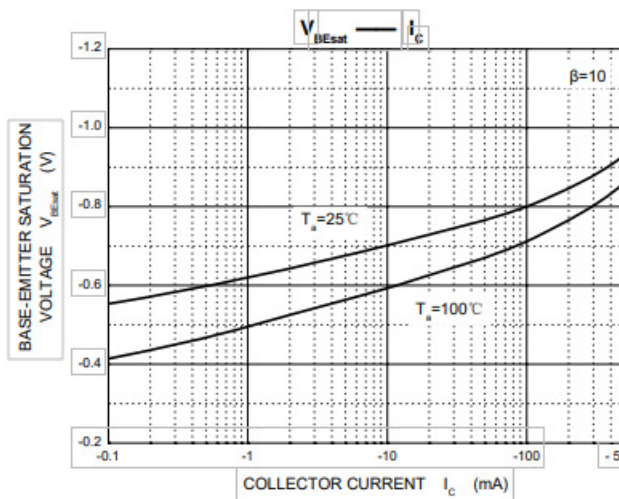
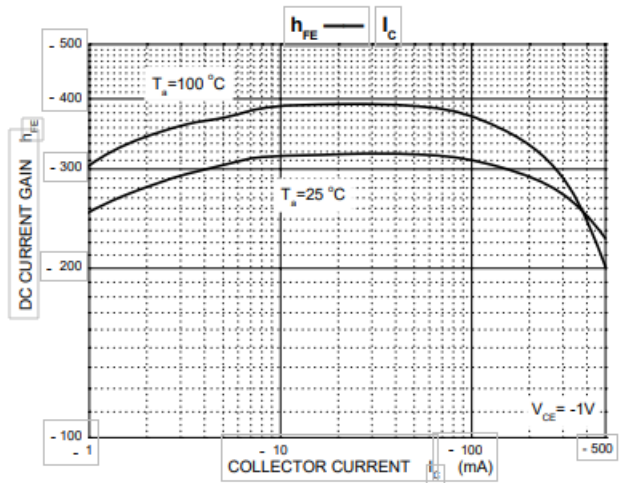
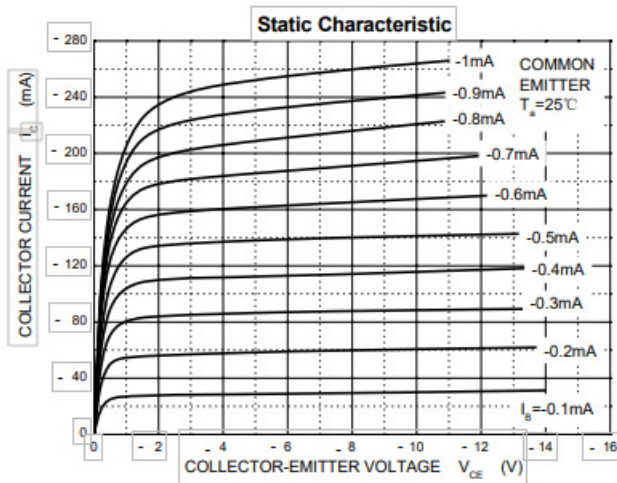
Parameters	Symbol		Value	Unit
Collector-Base Voltage	V _{CBO}	BC807	-50	V
		BC808	-30	
Collector-Emitter Voltage	V _{CEO}	BC807	-45	V
		BC808	-25	
Emitter -Base Voltage	V _{EBO}		-5	V
Collector Current-Continuous	I _c		-500	mA
Collector Power Dissipation	P _c		300	mW
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55-+150	°C

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbols	Test Condition	Limits		Unit	
			Min	Max		
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	BC807	-50		
			BC808	-30		
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-10mA, I _B =0	BC807	-45	V	
			BC808	-25		
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0		-5	V	
Collector cut-off current	I _{CBO}	V _{CB} =-45V, I _E =0		-100	nA	
Collector cut-off current	I _{CEO}	V _{CE} =-40V, I _E =0		-200	nA	
Emitter cut-off current	I _{EBO}	V _{EB} =-4V, I _C =0		-100	nA	
DC current gain	h _{FE}	V _{CE} =-1V, I _C =-100mA	807-16;808-16	110	250	
			807-25;808-25	160	450	
			807-40;808-40	250	600	
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		-1,10	V	
Transition frequency	f _T	V _{CE} =-5V, I _C =-10mA, f=100MHz	100		MHz	

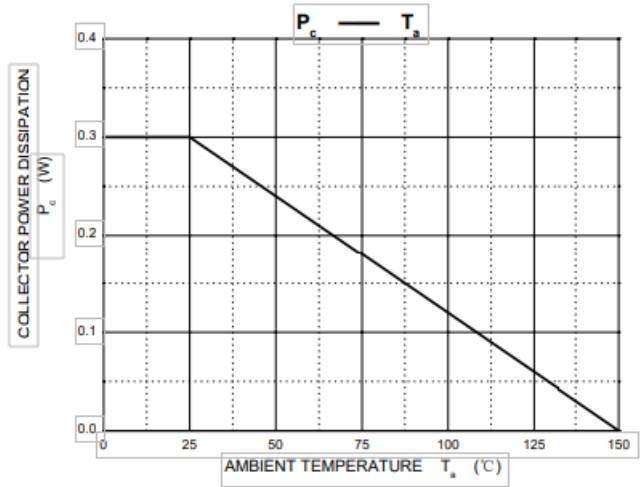
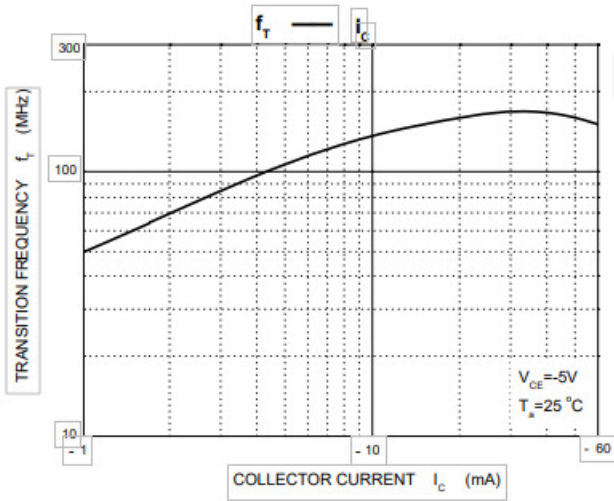
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Rating and Characteristic Curves



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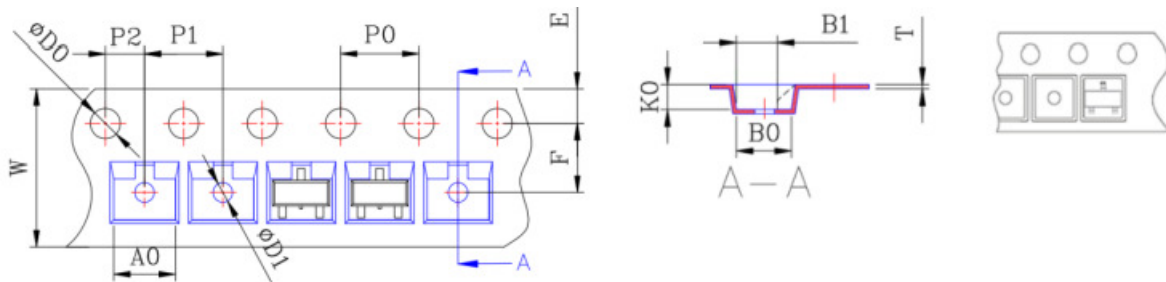
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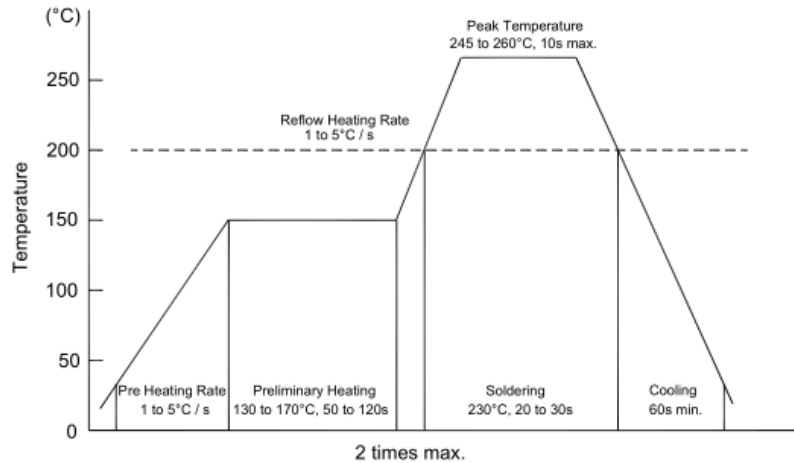


W	P1	E	F	D0	D1	P0	A0	B0	B1	K0	T	P2
8	4	1.75	3.5	1.5	1	4	3.15	2.77	2.06	1.22	0.2	2
+0.3/-0.1	±0.1	±0.1	±0.05	+0.1/-0	+0.25/-0	±0.1	±0.1	±0.1	±0.1	±0.1	±0.02	±0.05

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Lead Free Reflow Soldering Profile

- 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)

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Stock period

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 25°C ± 3°C and a relative humidity less than 80%RH

4/6/2025

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