

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Transistor Diode
SOT23

6/27/2024

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SPECIFICATION

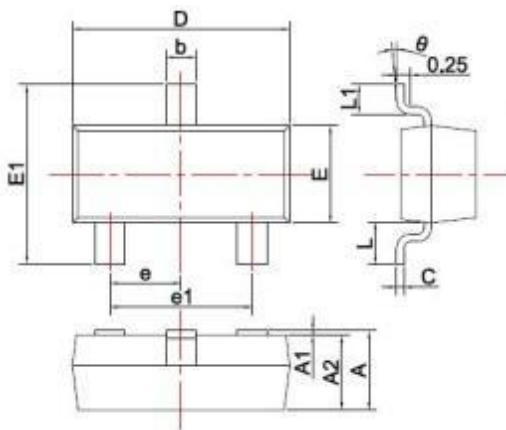
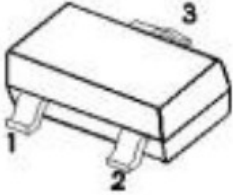
67A	BC85_xxxx	ST23	E03
Type	Type	Package	Packing
67A: Transistor Diode	BC856A	SOT23	E03: Embossed tape and reel for 3k pc (7'REEL)
	BC857A		
	BC858A		
	BC856B		
	BC857B		
	BC858B		
	BC857C		
	BC858C		

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

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Transistor Diode
BC856 thru BC858

PACKAGE OUTLINE



SYMBOL	DIMENSIONS	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
	0°	8°

Unit: mm

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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.)

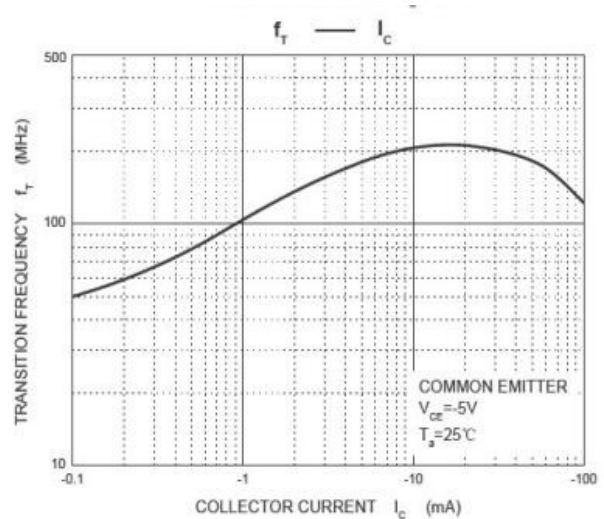
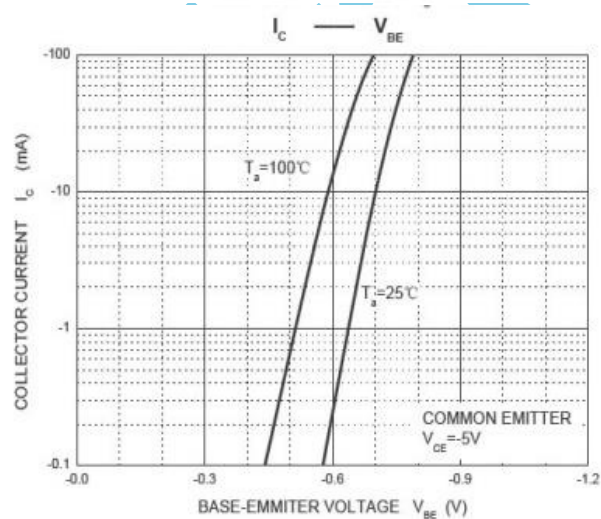
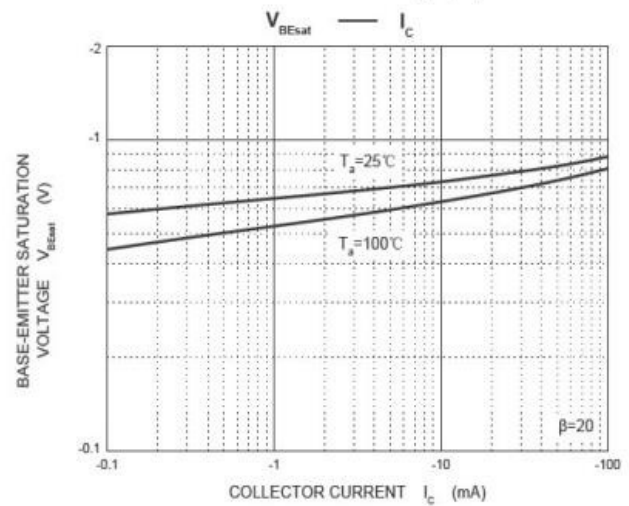
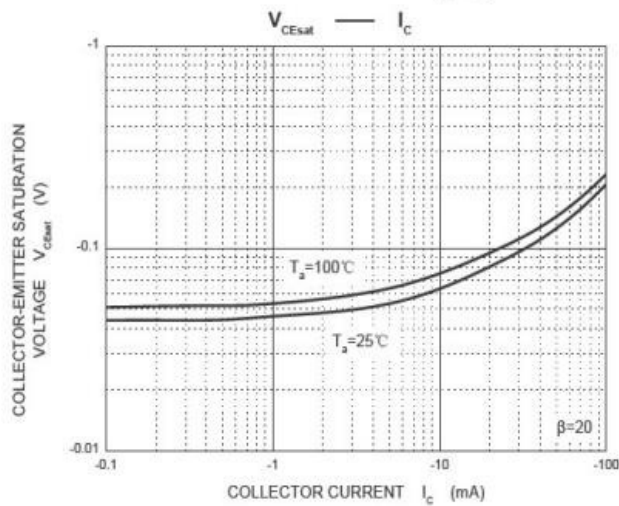
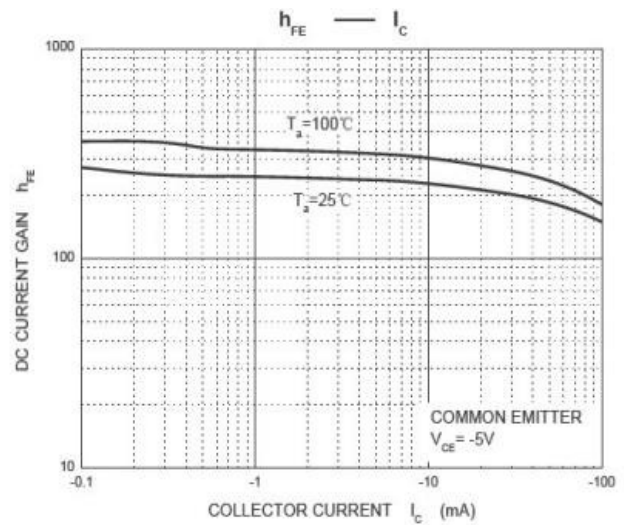
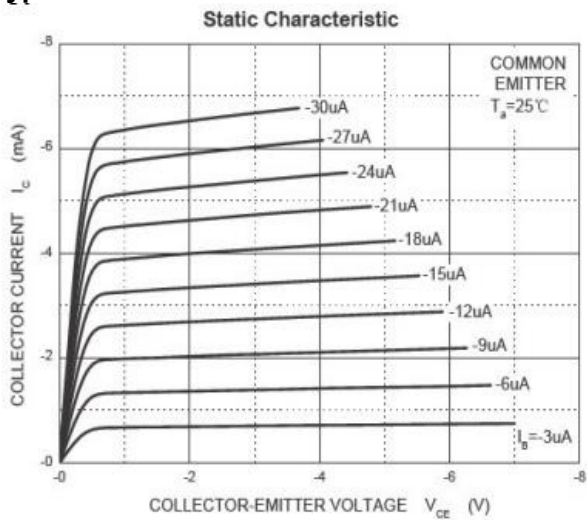
Parameters	Symbol		Value	Unit
Collector-Base Voltage	V _{CB0}	BC856 BC857 BC858	-80 -50 -30	V
Collector-Emitter Voltage	V _{CEO}	BC856 BC857 BC858	-65 -45 -30	V
Emitter -Base Voltage	V _{EBO}		-6	V
Collector Current-Continuous	I _C		-100	mA
Collector Power Dissipation	P _C		200	mW
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}		625	°C/W

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 BC856 BC857 BC858	-80 -50 -30		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-10mA, I _B =0 BC856 BC857 BC858	-65 -45 -30		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	-6		V
Collector cut-off current	I _{CB0}	V _{CB} =-70V, I _E =0 V _{CB} =-50V, I _E =0 V _{CB} =-30V, I _E =0 BC856 BC857 BC858		-100	nA
Collector cut-off current	I _{CEO}	V _{CE} =-60V, I _B =0 V _{CE} =-45V, I _B =0 V _{CE} =-30V, I _B =0 BC856 BC857 BC858		-100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0		-100	nA
DC current gain	h _{FE}	BC856A;BC857A;BC858A V _{CE} =-5V, I _C =-2mA BC856B;BC857B;BC858B BC857C;BC858C	110 200 420	220 450 800	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-100mA, I _B =-5mA		-0,50	V
Base -emitter saturation voltage	V _{BE(sat)}	I _C =-100mA, I _B =-5mA		-1,10	V
Transition frequency	f _T	V _{CE} =-5V, I _C =-10mA, f=100MHz	100		MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		4,5	pF

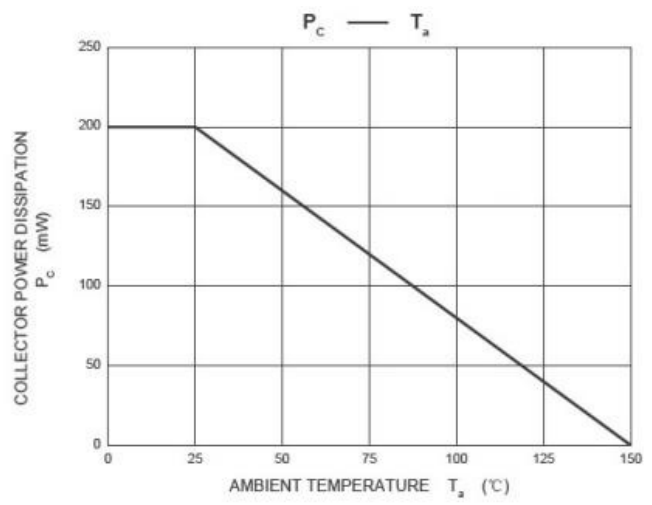
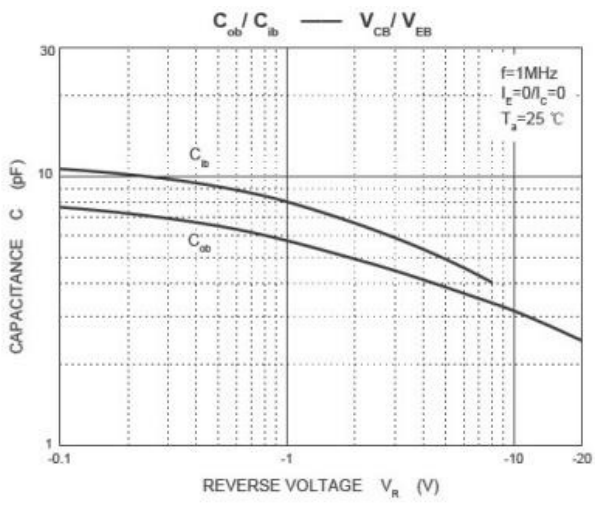
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Typical characteristics



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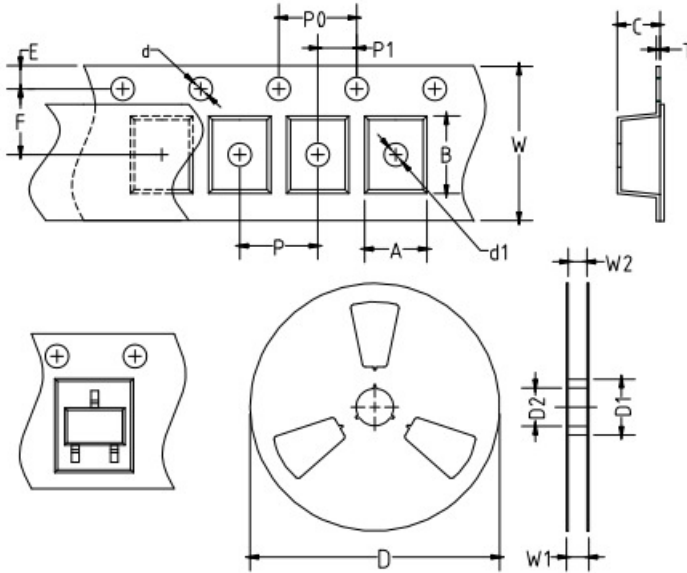
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Packag Information

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
Stroket 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

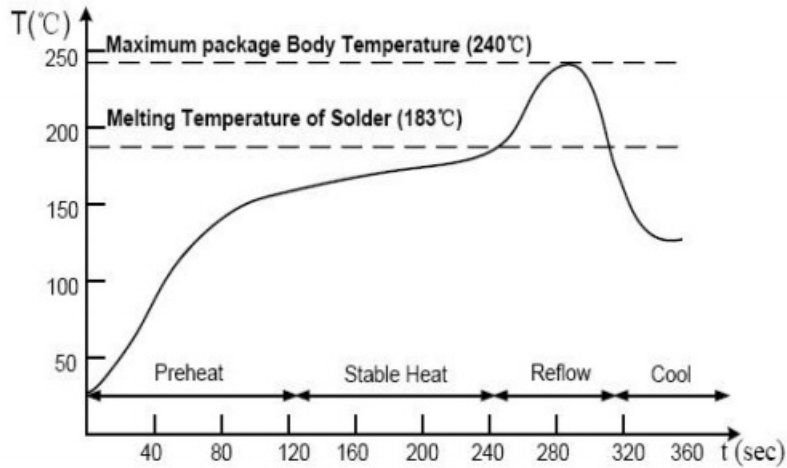
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Suggested Soldering Temperature Profile**Note**

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

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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 $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and a relative humidity less than 80%RH

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