

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV

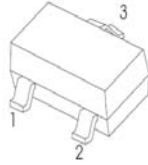
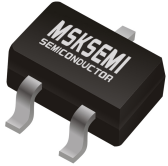


GDT



PLED

Product data sheet



- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

SOT - 23

DEVICE MARKING

P/N	MARK	P/N	MARK	P/N	MARK
BC856A	3A	BC856B	3B		
BC857A	3E	BC857B	3F	BC857C	3G
BC858A	3J	BC858B	3K	BC858C	3L

TRANSISTOR (PNP)

FEATURES

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications

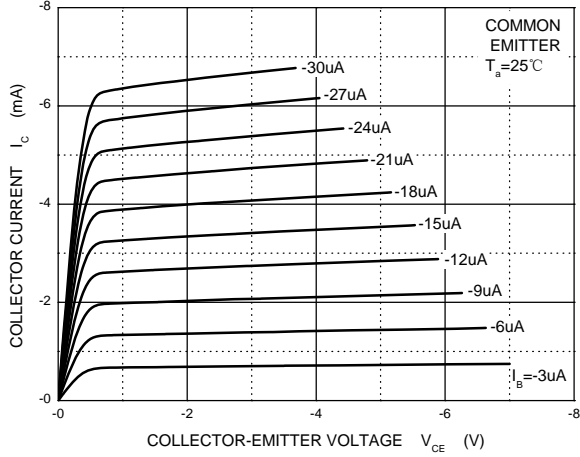
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	BC856	-80
		BC857	-50
		BC858	-30
V _{CEO}	Collector-Emitter Voltage	BC856	-65
		BC857	-45
		BC858	-30
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current –Continuous	-0.1	A
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _J ,T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

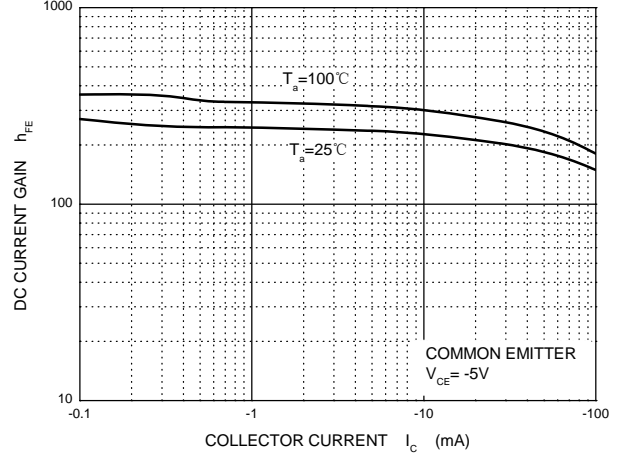
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BC856 BC857 BC858	V _{CBO} I _C = -10μA, I _E =0	-80		V
			-50		
			-30		
Collector-emitter breakdown voltage	BC856 BC857 BC858	V _{CEO} I _C = -10mA, I _B =0	-65		V
			-45		
			-30		
Emitter-base breakdown voltage	V _{EBO}	I _E = -1μA, I _C =0	-5		V
Collector cut-off current	BC856 BC857 BC858	I _{CBO} V _{CB} = -70 V, I _E =0 V _{CB} = -45 V, I _E =0 V _{CB} = -25 V, I _E =0		-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -5 V, I _C =0		-0.1	μA
DC current gain	BC856A, 857A,858A BC856B, 857B,858B BC857C,BC858C	h _{FE} V _{CE} = -5V,I _C = -2mA	125	250	
			220	475	
			420	800	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-100mA,I _B = -5 mA		-0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = -100mA, I _B = -5mA		-1.1	V
Transition frequency	f _T	V _{CE} = -5 V, I _C = -10mA f=100MHz	100		MHz
Collector capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		4.5	pF

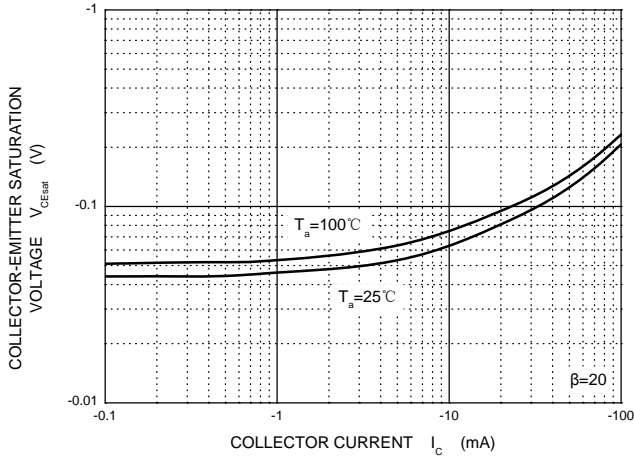
Static Characteristic



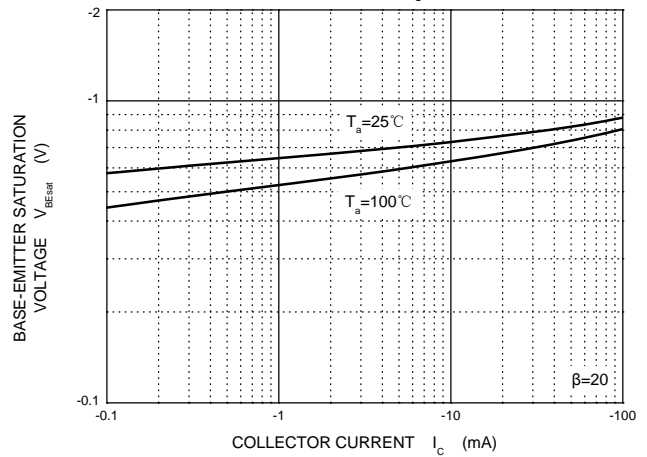
h_{FE} — I_c



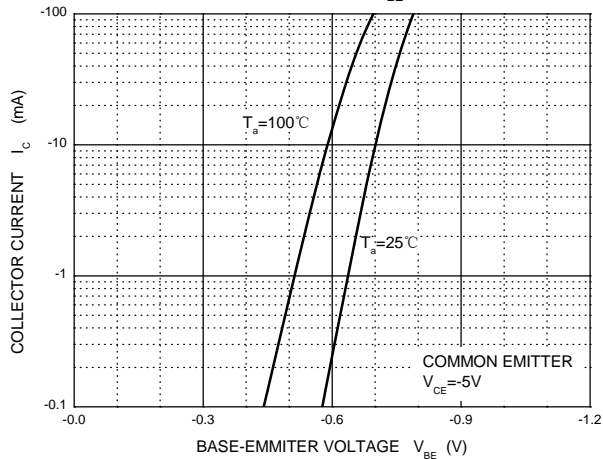
V_{CEsat} — I_c



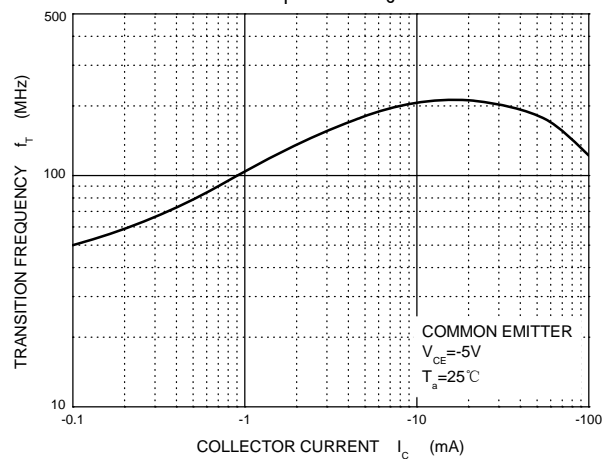
V_{BEsat} — I_c



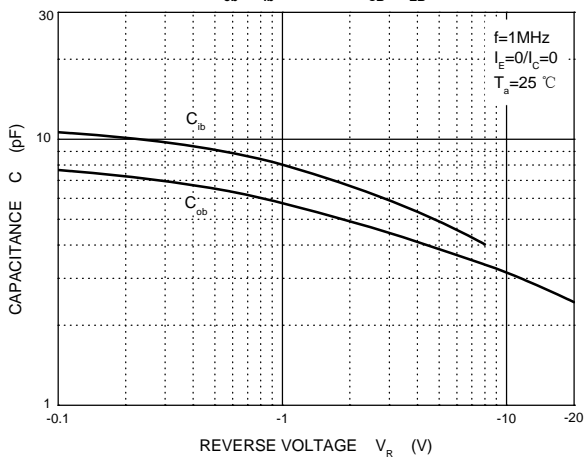
I_c — V_{BE}



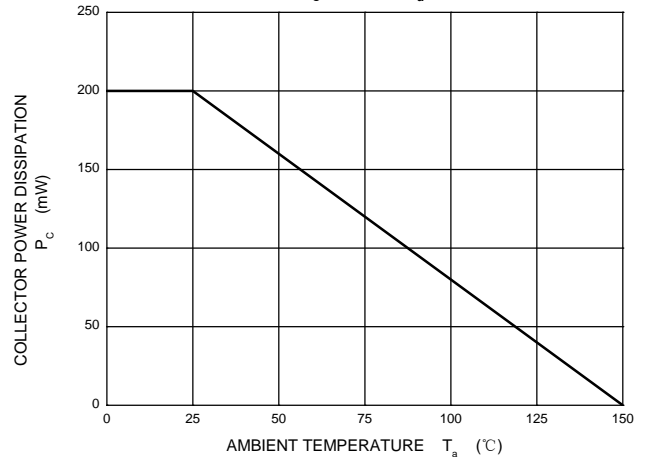
f_T — I_c



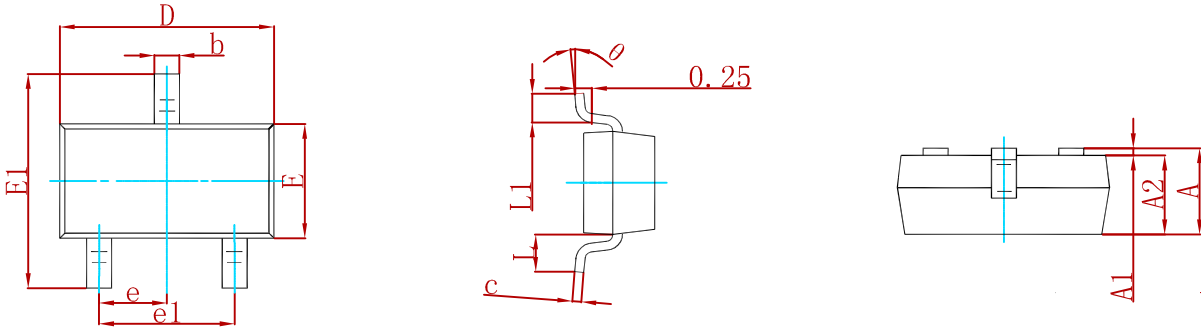
C_{ob}/C_{ib} — V_{CB}/V_{EB}



P_c — T_a

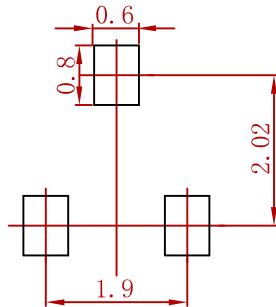


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BC856/57/58ABC	SOT-23	3000

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