

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV

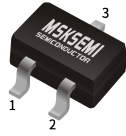


GDT



PLED

Product data sheet



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

**SOT-23**

TRANSISTOR (PNP)

**FEATURES**

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

**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

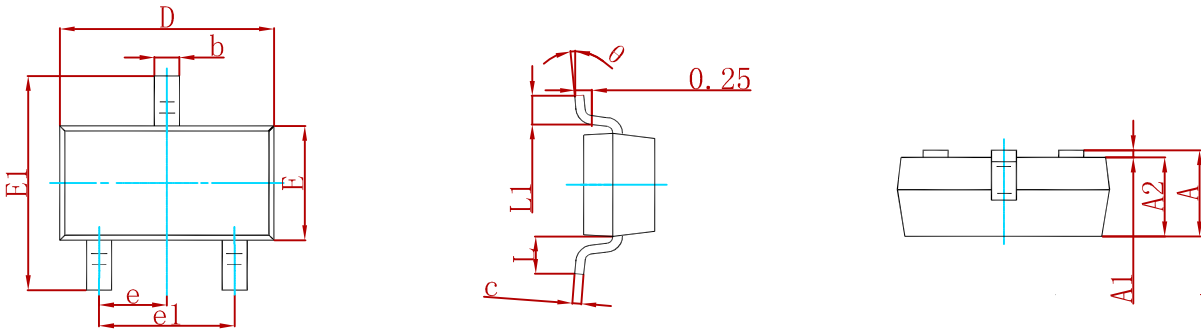
**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

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

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

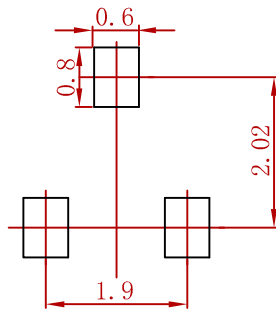
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	<b>BC856</b> <b>BC857</b> <b>BC858</b>	<b>V<sub>CBO</sub></b> I <sub>C</sub> = -10μA, I <sub>E</sub> =0	-80		V
			-50		
			-30		
Collector-emitter breakdown voltage	<b>BC856</b> <b>BC857</b> <b>BC858</b>	<b>V<sub>CEO</sub>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

**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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