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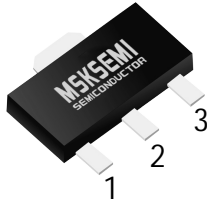


PLED

Product data sheet

**SOT-89**

1. BASE
2. COLLECTOR
3. EMITTER


**FEATURES**

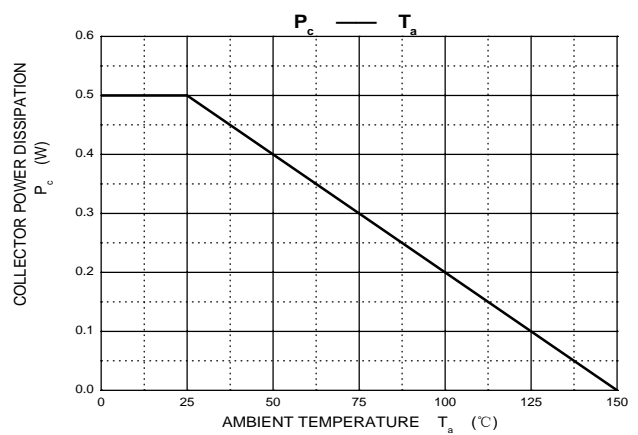
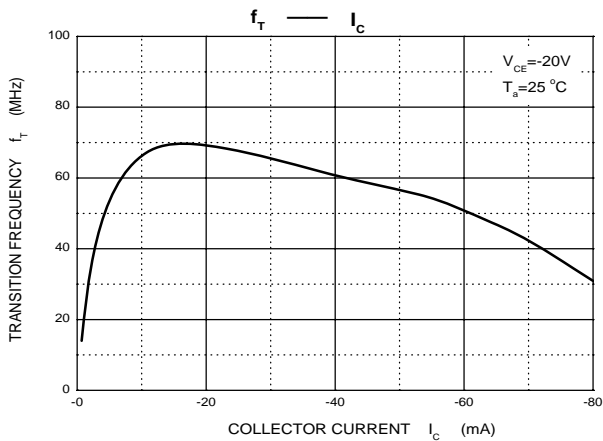
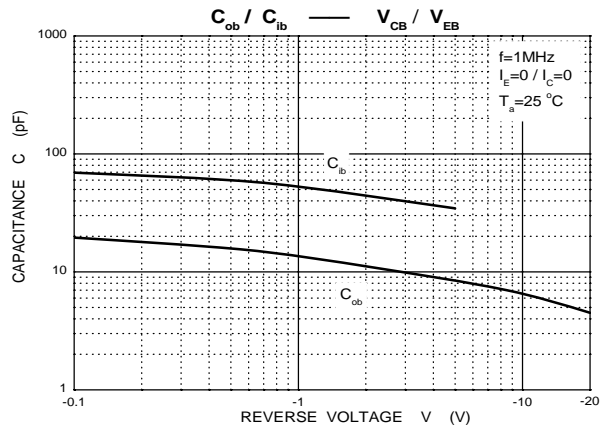
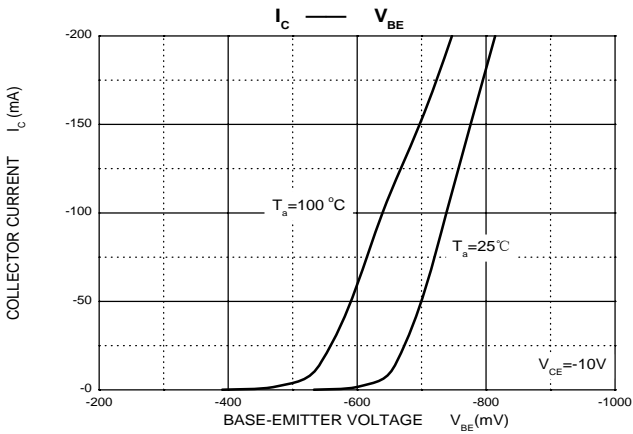
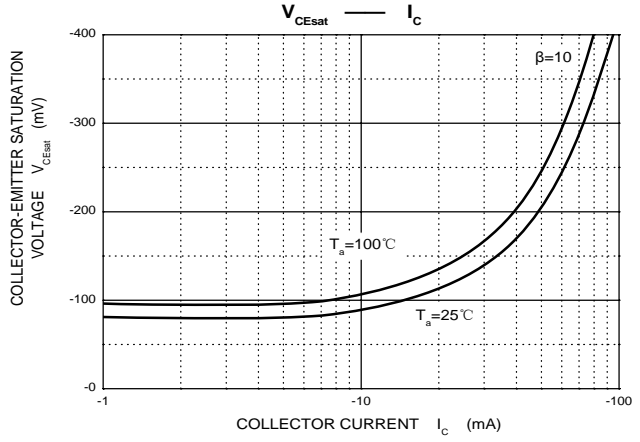
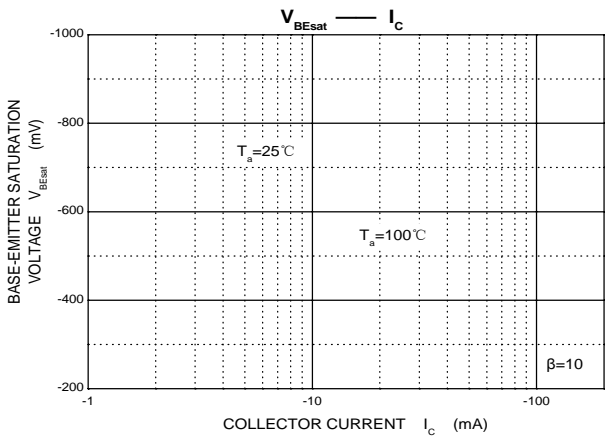
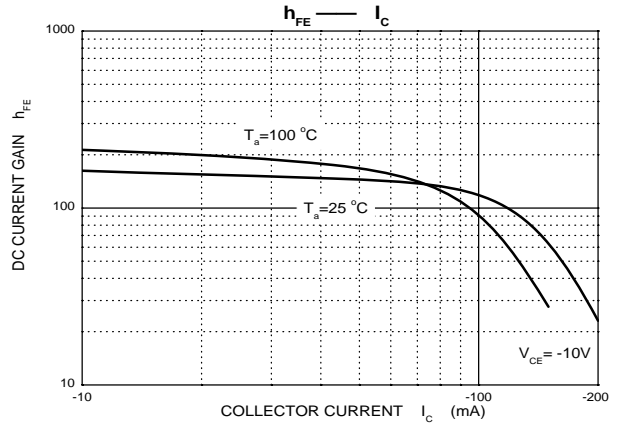
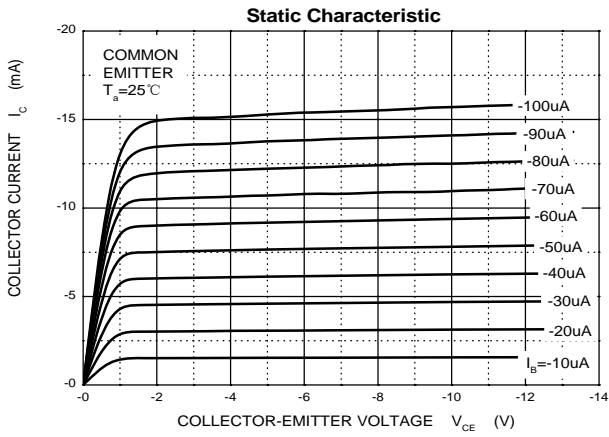
- Low Collector-Emitter Saturation Voltage
- High Breakdown Voltage

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

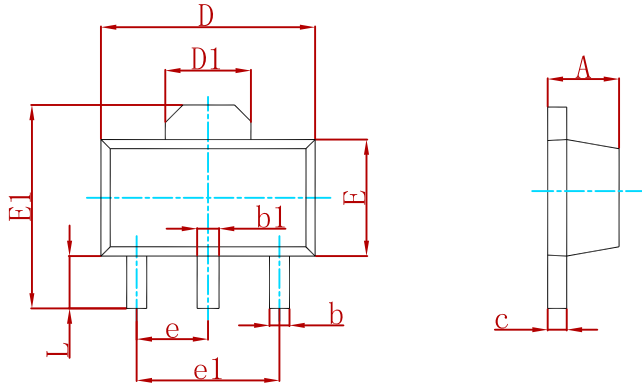
Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	-310	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-305	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current- Continuous	-200	mA
I <sub>CA</sub>	Collector Current -Pulsed	-500	mA
P <sub>C</sub>	Collector Power Dissipation	500	mW
R <sub>θJA</sub>	Thermal Resistance from Junction to Ambient	250	°C/W
T <sub>J</sub> , T <sub>stg</sub>	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	Typ	Max	Unit
<b>Collector-base breakdown voltage</b>	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-100μA, I <sub>E</sub> =0	-310			V
<b>Collector-emitter breakdown voltage</b>	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-305			V
<b>Emitter-base breakdown voltage</b>	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-100μA, I <sub>C</sub> =0	-5			V
<b>Collector cut-off current</b>	I <sub>CBO</sub>	V <sub>CB</sub> =-200V, I <sub>E</sub> =0			-0.25	μA
	I <sub>CEO</sub>	V <sub>CE</sub> =-200V, I <sub>B</sub> =0			-0.25	μA
		V <sub>CE</sub> =-300V, I <sub>B</sub> =0			-5	μA
<b>Emitter cut-off current</b>	I <sub>EBO</sub>	V <sub>EB</sub> =-5V, I <sub>C</sub> =0			-0.1	μA
<b>DC current gain</b>	h <sub>FE(1)</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-1mA	60			
	h <sub>FE(2)</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-10mA	100		300	
	h <sub>FE(3)</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-80mA	60			
<b>Collector-emitter saturation voltage</b>	V <sub>CE(sat)</sub>	I <sub>C</sub> =-20mA, I <sub>B</sub> =-2mA			-0.2	V
<b>Base-emitter saturation voltage</b>	V <sub>BE(sat)</sub>	I <sub>C</sub> =-20mA, I <sub>B</sub> =-2mA			-0.9	V
<b>Transition frequency</b>	f <sub>T</sub>	V <sub>CE</sub> =-20V, I <sub>C</sub> =-10mA, f=30MHz	50			MHz

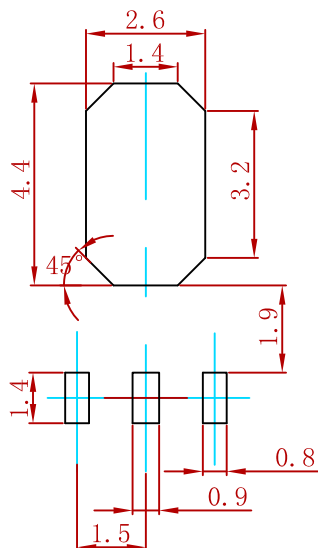


**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

**Suggested Pad Layout**



Note:  
 1. Controlling dimension: in millimeters.  
 2. General tolerance:  $\pm 0.05\text{mm}$ .  
 3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
A92	SOT-89	1000

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