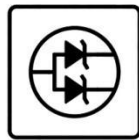


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SEMICONDUCTOR



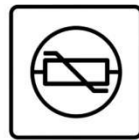
ESD



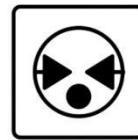
TVS



TSS



MOV



GDT

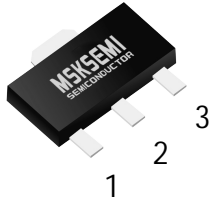


PLED

Product data sheet

SOT-89

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



FEATURES

- Low Collector-Emitter Saturation Voltage
- High Breakdown Voltage

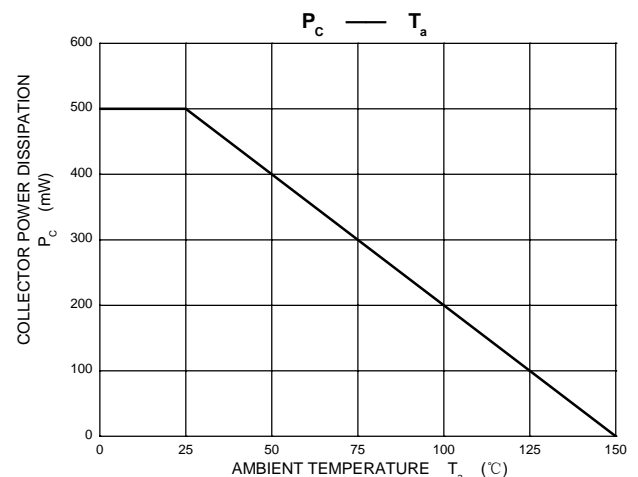
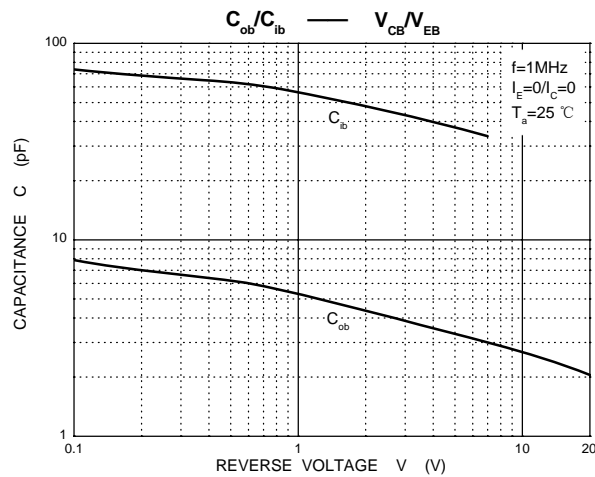
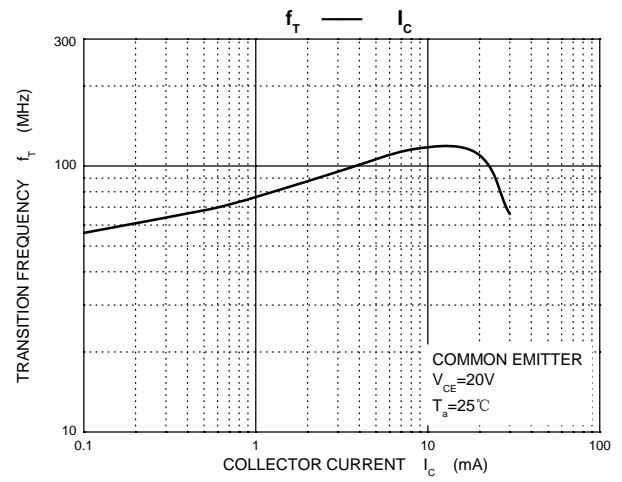
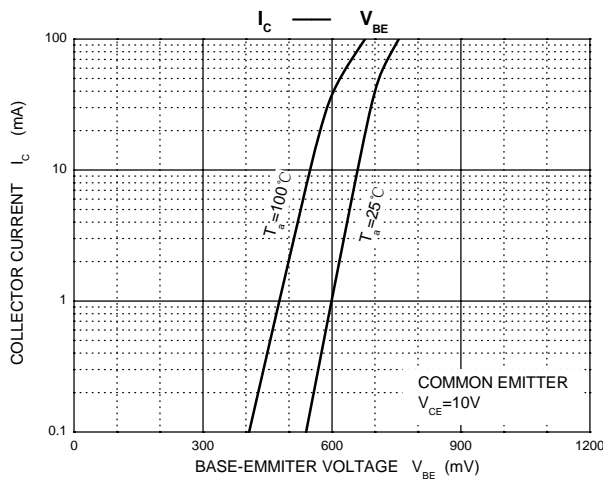
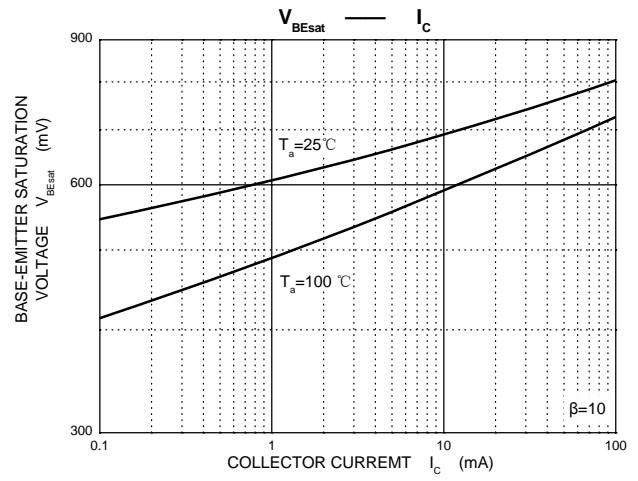
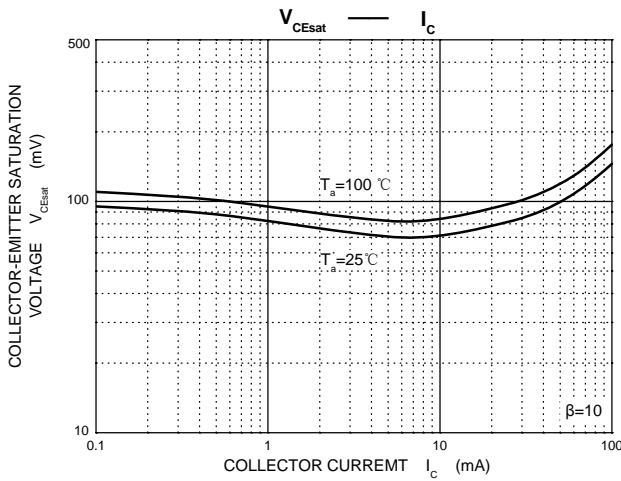
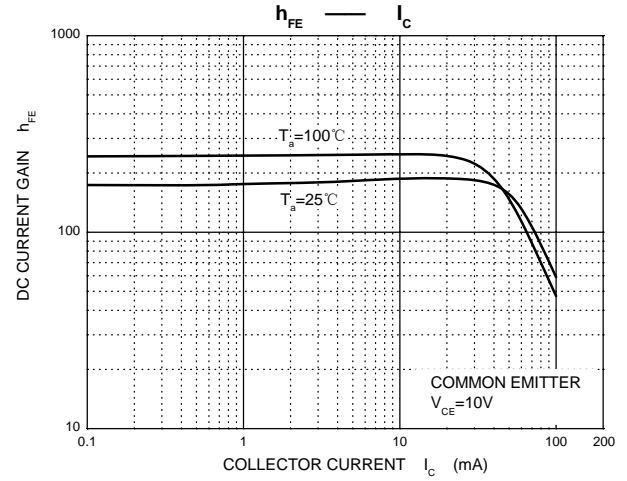
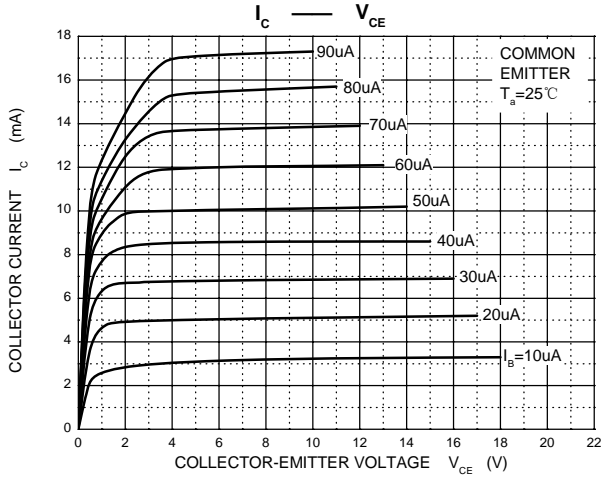
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	310	V
V _{CEO}	Collector-Emitter Voltage	305	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	200	mA
I _{CM}	Collector Current -Pulsed	500	mA
P _C	Collector Power Dissipation	500	mW
R _{θJA}	Thermal Resistance from Junction to Ambient	250	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

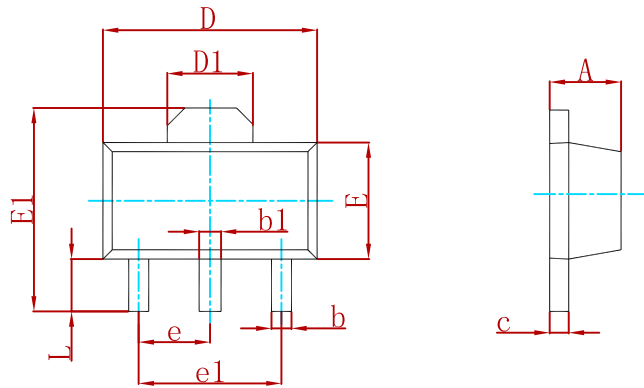
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	310			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	305			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
Collector cut-off current	I _{CB0}	V _{CB} =200V, I _E =0			0.25	μA
	I _{CEX}	V _{CE} =100V, V _X =5V			5	μA
		V _{CE} =300V, V _X =5V			10	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =10V, I _C =1mA	60			
	h _{FE(2)}	V _{CE} =10V, I _C =10mA	100		300	
	h _{FE(3)}	V _{CE} =10V, I _C =30mA	75			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =20mA, I _B =2mA			0.2	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =20mA, I _B =2mA			0.9	V
Transition frequency	f _T	V _{CE} =20V, I _C =10mA, f=30MHz	50			MHz

Typical Characteristics

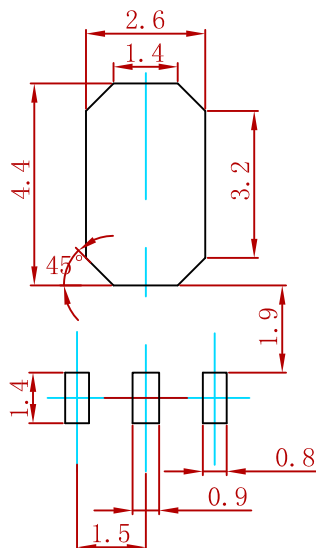


PACKAGE MECHANICAL DATA



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: ±0.05mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
A42	SOT-89	1000

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