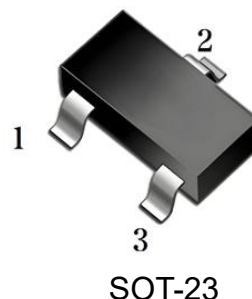
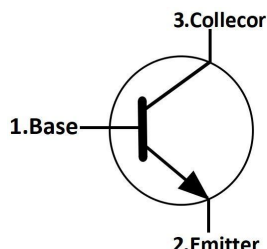


NPN type transistors

Parameter	Value	Unit
V _{CBO}	40	V
I _C	0.5	A



Features

- Complimentary to S8550
- Collector Current: I_C=0.5A

Maximum Ratings (T_a=25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Collector-base voltage	V _{CBO}	40	V
Collector-emitter voltage	V _{CEO}	25	V
Emitter-base voltage	V _{EBO}	5	V
Collector current	I _C	0.5	A
Collector Power Dissipation	P _C	300	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55~150	°C
Thermal Resistance From Junction To Ambient	R _{ΘJA}	417	°C/W

Note:

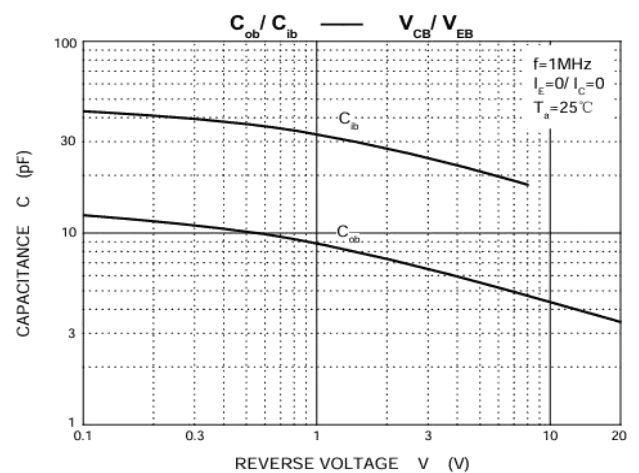
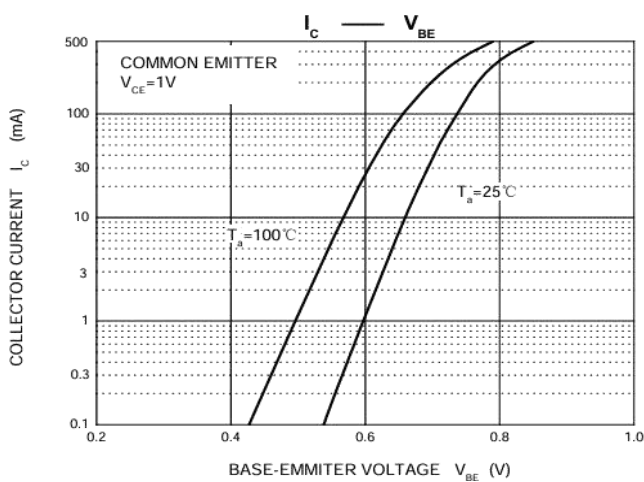
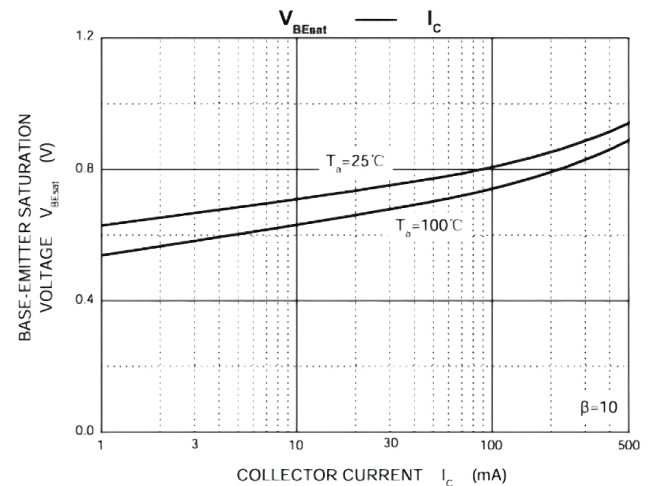
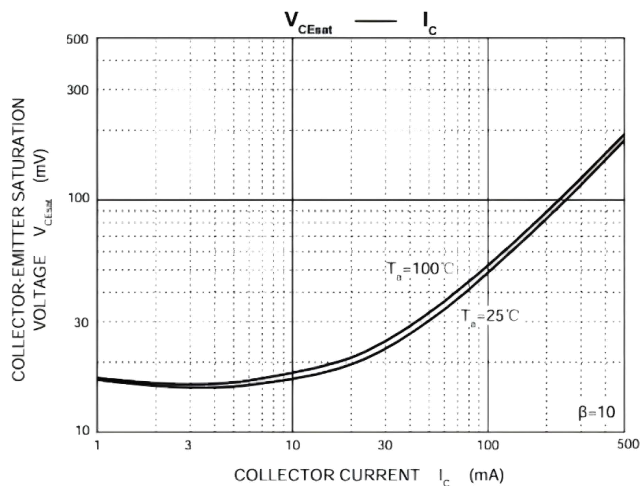
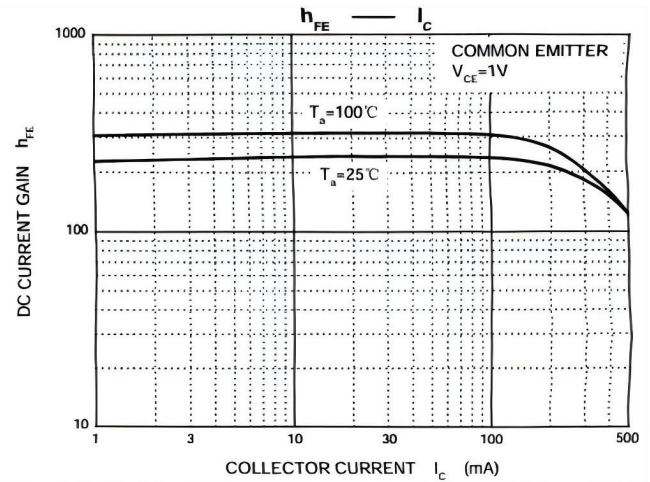
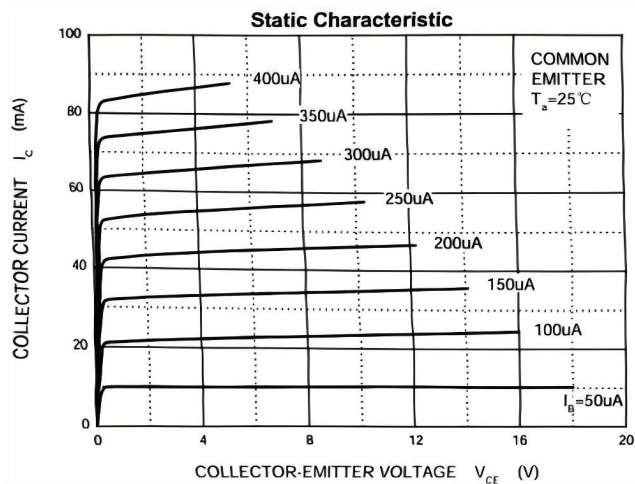
1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.
2. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

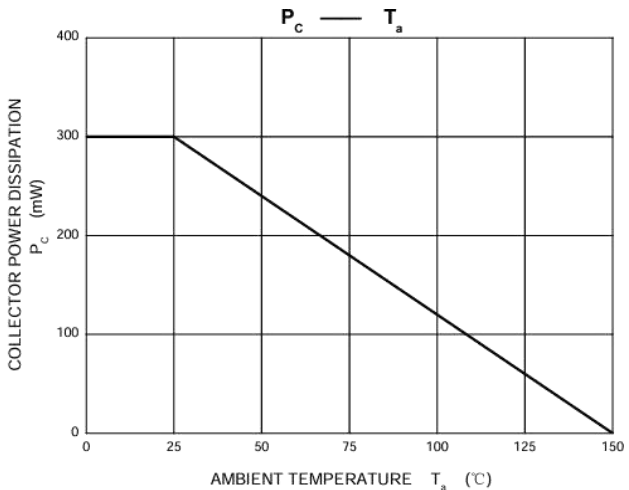
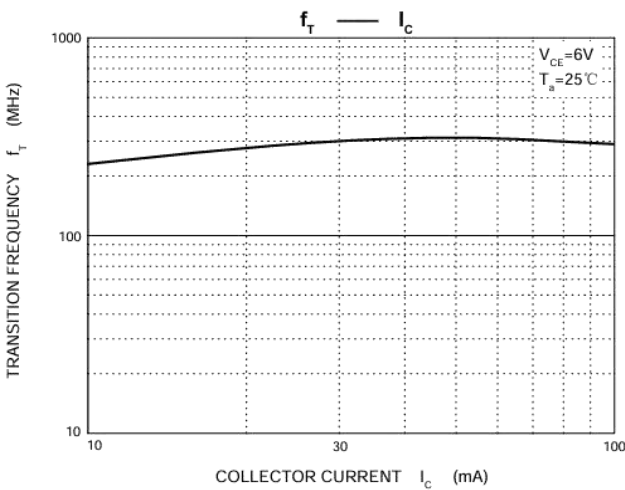
Electrical Characteristics (T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Max	Units
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	40		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	25		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5		V
Collector cutoff current	I _{CBO}	V _{CB} =40V, I _E =0		0.1	μA
Collector cut-off current	I _{CEO}	V _{CE} =20V, I _B =0		0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0		0.1	μA
DC Current Gain (classification of hFE1)	A	V _{CE} =1V, I _C =50mA	120	200	
	B		200	350	

		C	300	400	
	HFE2	$V_{CE}=1V, I_C=500mA$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$		0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$		1.2	V
Transition frequency	f_T	$V_{CE}=6V, I_C=20mA, f=30MHz$	150		MHz

Characteristics diagrams





Package Outlines

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°

Note:

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

NOTICE

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While Hypersemi exerts maximum efforts to ensure product quality and reliability, semiconductor devices may malfunction or fail due to inherent electrical sensitivity and susceptibility to physical stress. When utilizing Hypersemi products, the Buyer is obligated to:

- 1) Comply with applicable safety standards in designing a secure system architecture;
- 2) Implement redundancy, fire-prevention measures, and malfunction prevention protocols;
- 3) Mitigate risks of accidents, fires, or societal damages resulting from product use.
- 4) Designers must ensure Hypersemi products operate strictly within specified parameters defined in the latest product specifications.