

FEATURE

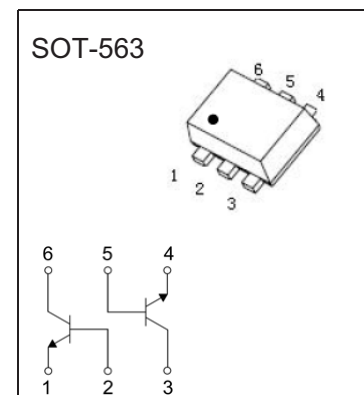
- Epitaxial planar die construction
- Ideal for low power amplification and switching

MARKING



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

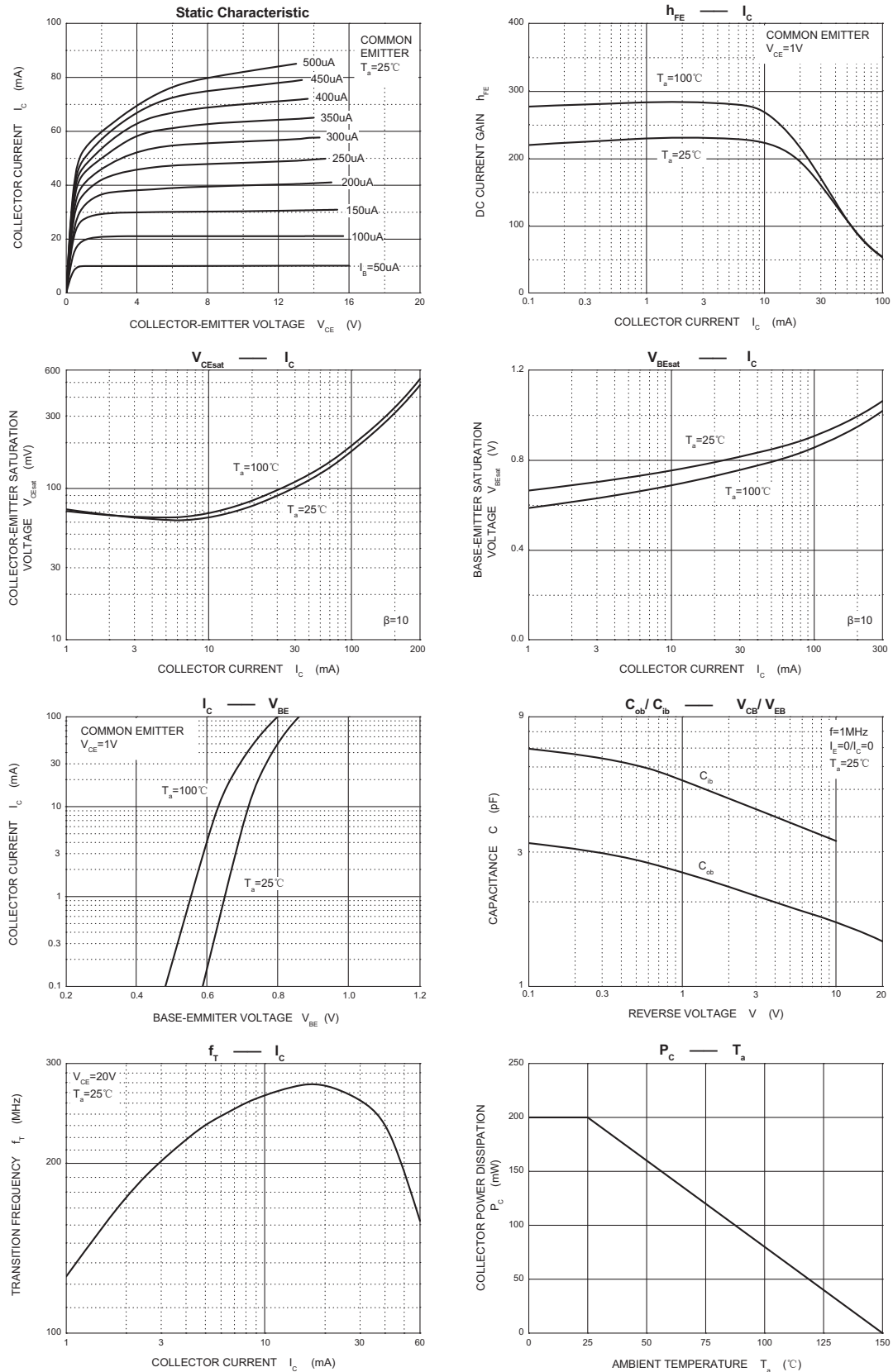
Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	40	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	0.2	A
P _C	Collector Power Dissipation	0.2	W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C



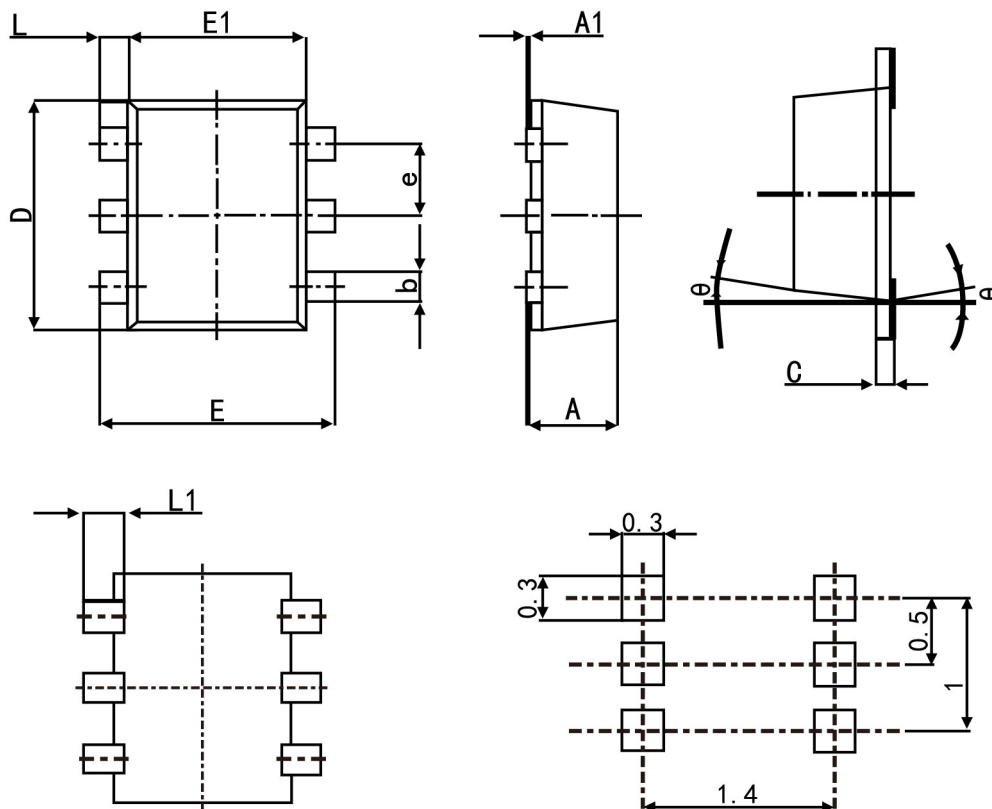
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =10μA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0			0.05	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.05	μA
Collector cut-off current	I _{CEX}	V _{CE} =30V, V _{BE(off)} =3V			0.05	μA
DC current gain	h _{FE(1)}	V _{CE} =1V, I _C =0.1mA	40			
	h _{FE(2)}	V _{CE} =1V, I _C =1mA	70			
	h _{FE(3)}	V _{CE} =1V, I _C =10mA	100		300	
	h _{FE(4)}	V _{CE} =1V, I _C =50mA	60			
	h _{FE(5)}	V _{CE} =1V, I _C =100mA	30			
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C =10mA, I _B =1mA			0.2	V
	V _{CE(sat)2}	I _C =50mA, I _B =5mA			0.3	V
Base-emitter saturation voltage	V _{BE(sat)1}	I _C =10mA, I _B =1mA	0.65		0.85	V
	V _{BE(sat)2}	I _C =50mA, I _B =5mA			0.95	V
Transition frequency	f _T	V _{CE} =20V, I _C =10mA, f=100MHz	300			MHz
Collector output capacitance	C _{ob}	V _{CB} =5V, I _E =0, f=1MHz				pF
Delay time	t _d	V _{CC} =3V, V _{BE(off)} =-0.5V			35	ns
Rise time	t _r	I _C =10mA, I _{B1} =-I _{B2} =1mA			35	ns
Storage time	t _s	V _{CC} =3V, I _C =10mA			200	ns
Fall time	t _f	I _{B1} =-I _{B2} =1mA			50	ns

Typical Characteristics



SOT-563 Package Outline Dimensions



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.525	0.600
A1	0.000	0.050
e	0.450	0.550
c	0.090	0.160
D	1.500	1.700
b	0.170	0.270
E1	1.100	1.300
E	1.500	1.700
L	0.100	0.300
L1	0.200	0.400
θ	7 °REF.	