



UNISONIC TECHNOLOGIES CO., LTD

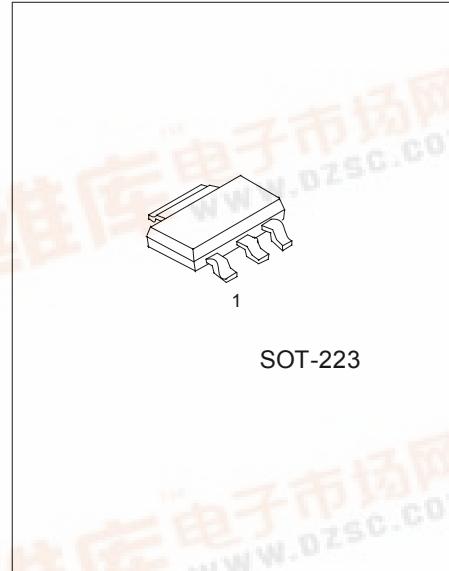
UP1855

PNP SILICON TRANSISTOR

HIGH CURRENT TRANSISTOR

FEATURES

- * High current switching
- * Low $V_{CE(SAT)}$
- * High h_{FE}



*Pb-free plating product number: UP1855L

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
UP1855-x-AA3-R	UP1855L-x-AA3-R	SOT-223	B	C	E	Tape Reel

UP1855L-x-AA3-R (1) Packing Type (2) Package Type (3) Rank (4) Lead Plating		(1) R: Tape Reel (2) AA3: SOT-223 (3) refer to Classification of h_{FE2} (4) L: Lead Free Plating, Blank: Pb/Sn
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UP1855

PNP SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector -Base Voltage	V _{CBO}	-180	V
Collector -Emitter Voltage	V _{CEO}	-140	V
Emitter -Base Voltage	V _{EBO}	-6	V
Collector Current (Pulse)	I _{CM}	-10	A
Collector Current (DC)	I _C	-4	A
Power Dissipation	P _D	1	W
Junction Temperature	T _J	+150	
Storage Temperature	T _{STG}	-40 ~ +150	

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta = 25 °C, unless otherwise specified)

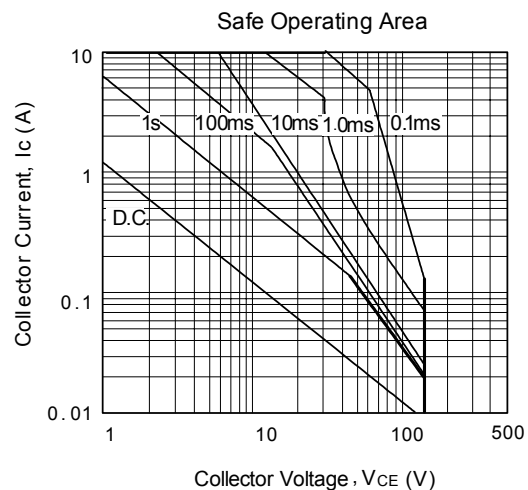
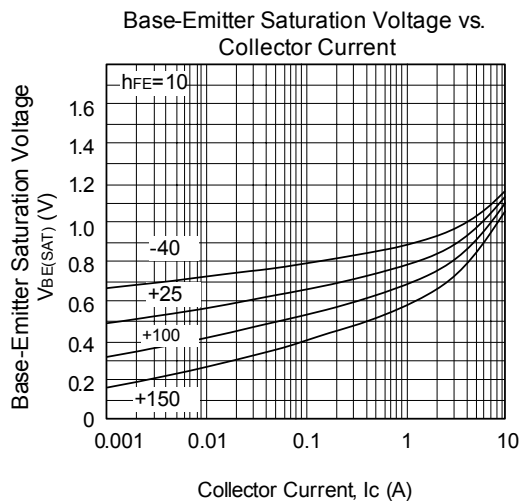
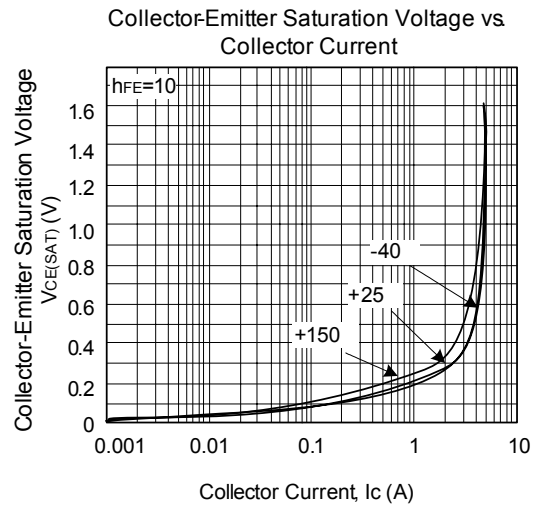
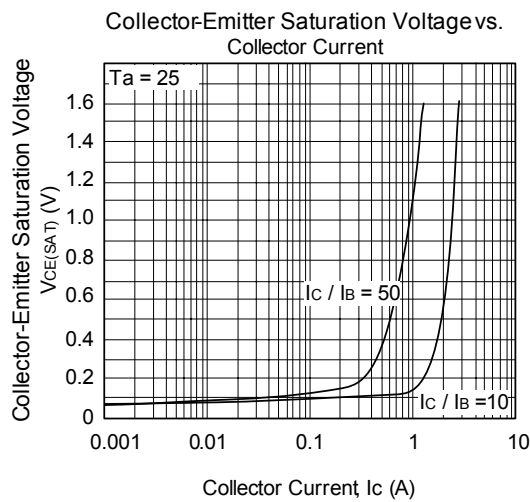
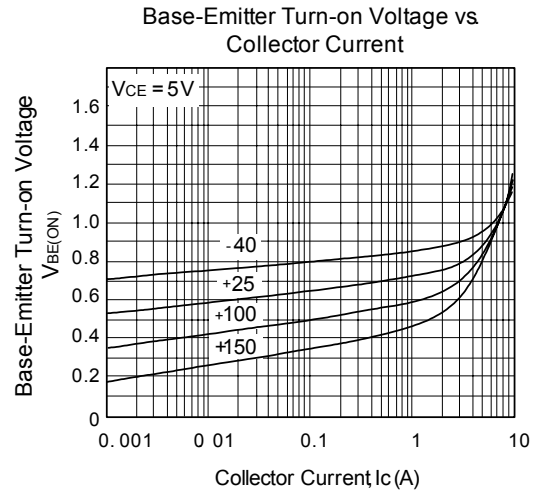
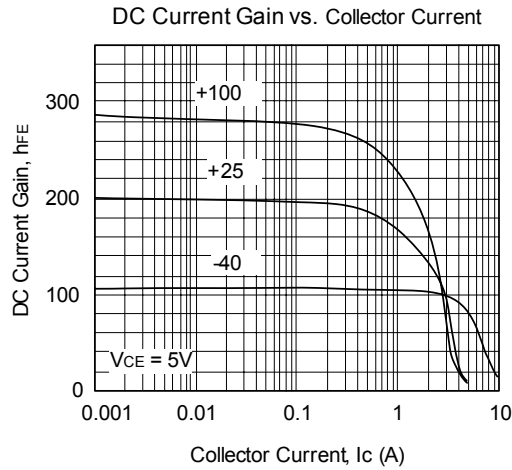
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CBO}	I _C = -100μA	-180	-210		V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C = -10mA	-140	-170		V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E = -100μA	-6	-8		V
Collector Cut-off Current	I _{CBO}	V _{CB} = -150V V _{CB} = -150V, Ta = 100°C			-50 -1	nA μA
Emitter Cut-off Current	I _{EBO}	V _{EB} = -6V			-10	nA
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C = -100mA, I _B = -5mA I _C = -500mA, I _B = -50mA I _C = -1A, I _B = -100mA I _C = -3A, I _B = -300mA		-30 -70 -110 -275	-60 -120 -150 -370	mV
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C = -3A, I _B = -300mA		-970	-1110	mV
Base-Emitter Turn-On Voltage	V _{BE(ON)}	I _C = -3A, V _{CE} = -5V		-830	-950	mV
DC Current Gain	h _{FE1}	I _C = -10mA, V _{CE} = -5V	100	200		
	h _{FE2}	I _C = -1A, V _{CE} = -5V	100		300	
	h _{FE3}	I _C = -3A, V _{CE} = -5V	75	140		
	h _{FE4}	I _C = -10A, V _{CE} = -5V		10		
Transition Frequency	f _T	I _C = -100mA, V _{CE} = -10V, f = 50MHz		110		MHz
Output Capacitance	C _{ob}	V _{CB} = -20V, f = 1MHz		40		pF
Switching Times	t _{ON}	I _C = -1A, V _{CC} = -50V		68		ns
	t _{OFF}	I _{B1} = -100mA, I _{B2} = 100mA		1030		ns

Note: Pulse test: t_p ≤ 300μs, Duty cycle ≤ 2%

■ CLASSIFICATION OF h_{FE2}

RANK	A	B
RANGE	100 ~ 200	180 ~ 300

■ TYPICAL CHARACTERISTICS



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