



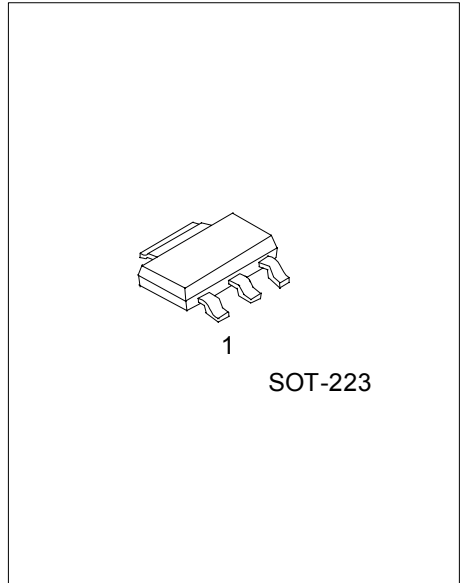
UP1868

PNP SILICON TRANSISTOR

LOW SATURATION VOLTAGE PNP POWER TRANSISTOR

■ FEATURES

- * Low saturation voltage with equivalent on-resistance be $R_{CE(SAT)}$ about 40mΩ at 5A)
- * High gain that can be replace parts for power MOSFET.



*Pb-free plating product number: UP1868L

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
UP1868-AA3-R	UP1868L-AA3-R	SOT-223	B	C	E	Tape Reel

<p>UP1868L-AA3-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Plating</p>	<p>(1) R: Tape Reel</p> <p>(2) AA3: SOT-223</p> <p>(3) L: Lead Free Plating, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-15	V
Collector-Emitter Voltage	V_{CEO}	-12	V
Emitter-Base Voltage	V_{EBO}	-6	V
Peak Pulse Current	$I_{C(PEAK)}$	-20	A
Continuous Collector Current	I_C	-6	A
Power Dissipation	P_C	3	W
Junction Temperature	T_J	+150	
Storage Temperature	T_{STG}	-40 ~ +150	

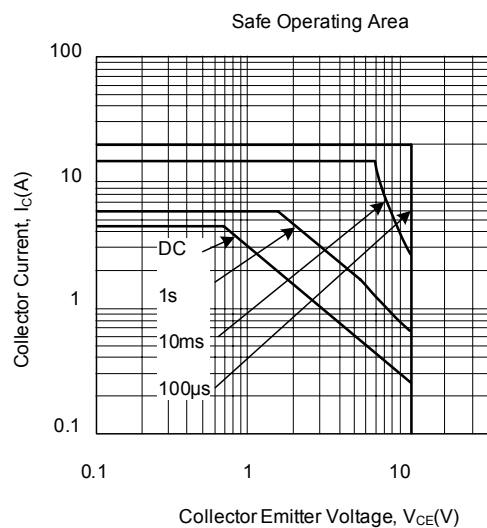
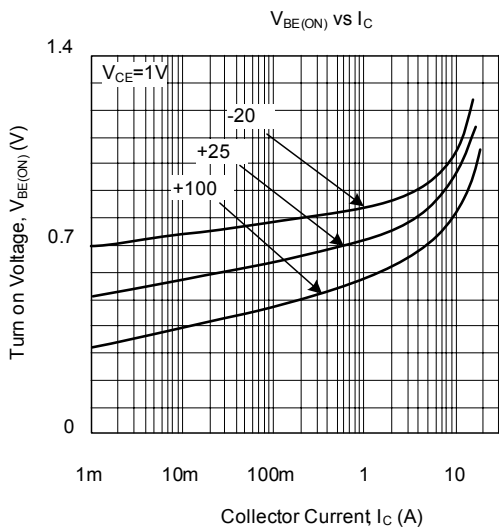
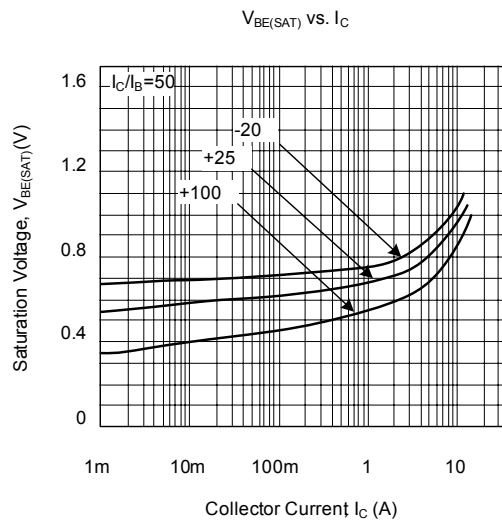
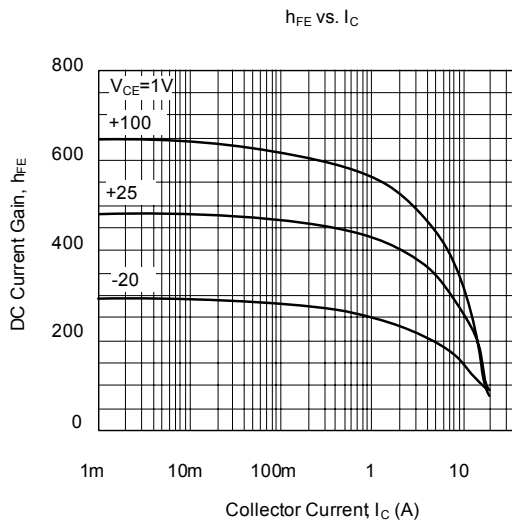
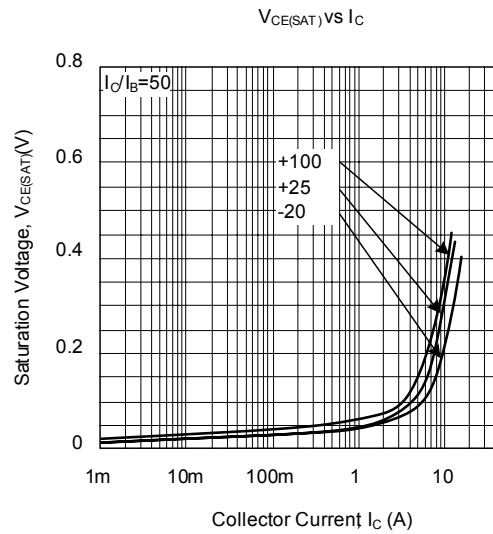
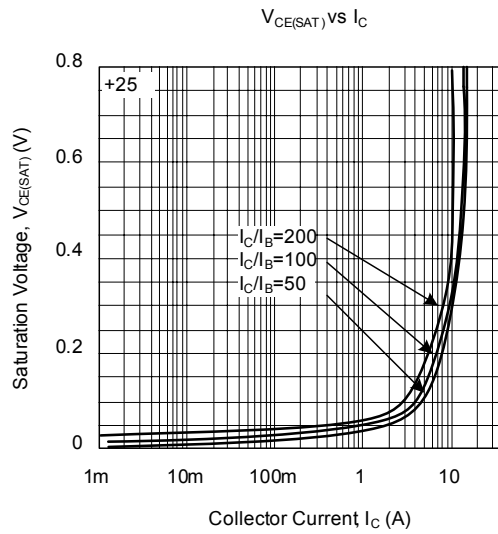
Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (at Ta = 25 unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Breakdown Voltage (Note)	BV_{CBO}	$I_C = -100\mu A$	-15			V
	BV_{CEO}	$I_C = -10mA$	-12			V
	BV_{EBO}	$I_E = -100\mu A$	-6			V
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)}$	$I_C = -500mA, I_B = -5mA$		-55	-100	mV
		$I_C = -2A, I_B = -50mA$		-132	-160	mV
		$I_C = -6A, I_B = -250mA$			-440	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = -6A, I_B = -250mA$		-1050	-1200	mV
Base-Emitter Turn-On Voltage (Note)	$V_{BE(ON)}$	$V_{CE} = -1V, I_C = -6A$		-950	-1050	mV
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -12V$			-10	nA
		$V_{CB} = -12V, T_a = 100$			-1.0	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -6V$			-10	nA
DC Current Gain (Note)	h_{FE1}	$V_{CE} = -1V, I_C = -10mA$	300			
	h_{FE2}	$V_{CE} = -1V, I_C = -500mA$	300		1000	
	h_{FE3}	$V_{CE} = -1V, I_C = -5mA$	200			
	h_{FE4}	$V_{CE} = -1V, I_C = -10A$	150			
Current Gain Bandwidth Product	f_T	$V_{CE} = -10V, I_C = -100mA, f = 50MHz$		80		MHz
Output Capacitance	C_{ob}	$V_{CB} = -20V, f = 1MHz$		161		pF
Switching Times	t_{ON}	$I_C = -4A, I_{B1} = -400mA$		120		ns
	t_{OFF}	$I_{B2} = 400mA, V_{CC} = -10V$		116		

Note: Pulse test: Pulse Width=300 μs , Duty Cycle 2%

TYPICAL CHARACTERISTICS



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