



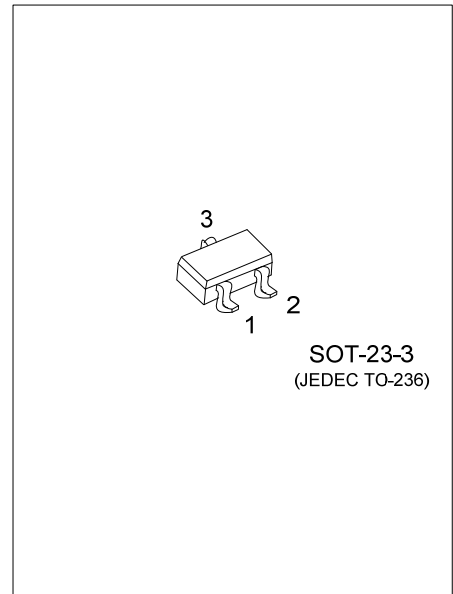
UP2518

PNP TRANSISTOR

LOW $V_{CE(SAT)}$ PNP SILICON POWER TRANSISTORS

FEATURES

- * Extremely low collector-emitter saturation voltage $V_{CE(SAT)}$ and corresponding extremely low equivalent on-resistance $R_{CE(SAT)}$ (97mΩ at 1.5A)
- * High collector current capability(1.5A)
- * High peak pulse current up to 6A
- * High collector current gain



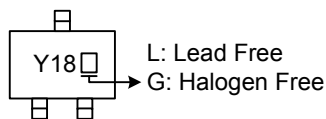
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UP2518L-AE3-R	UP2518G-AE3-R	SOT-23	B	E	C	Tape Reel

Note: Pin Assignment: B: Base E: Emitter C: Collector

	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
--	--	---

MARKING



■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$, unless otherwise stated)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-20	V
Collector-Emitter Voltage	V_{CEO}	-20	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current (Note 2)	I_{PEAK}	-6	A
Continuous Collector Current	I_C	-1.5	A
Base Current	I_B	-500	mA
Power Dissipation (Note 3)	$T_A=25^\circ\text{C}$ P_D	625	mW
Junction Temperature	T_J	+150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Notes: 1. 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.

2. Pulse width=300 μs . Duty cycle \leq 2%.

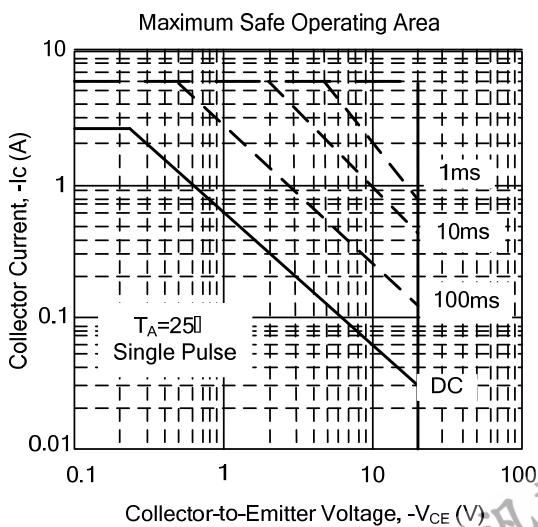
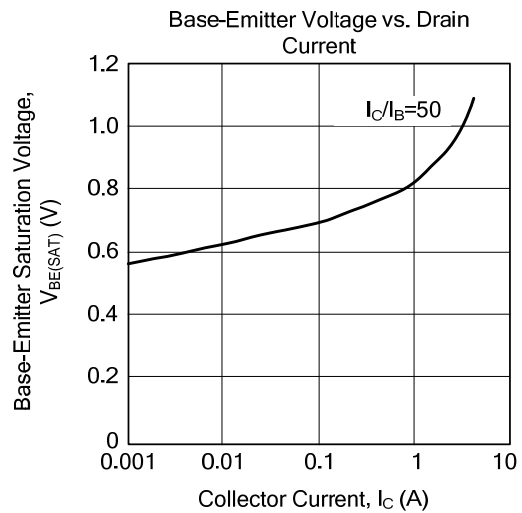
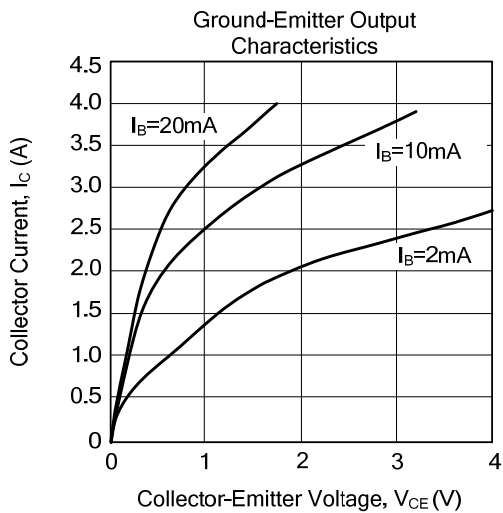
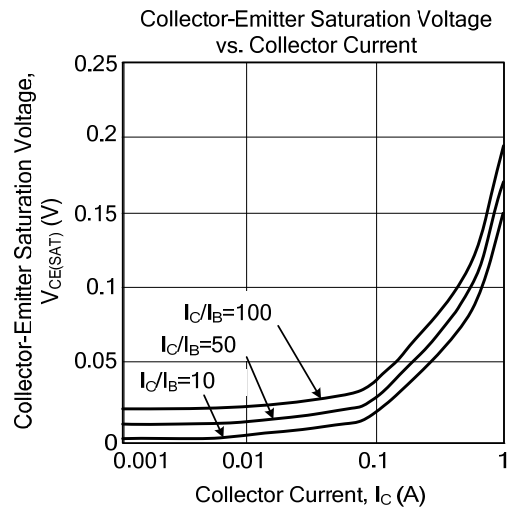
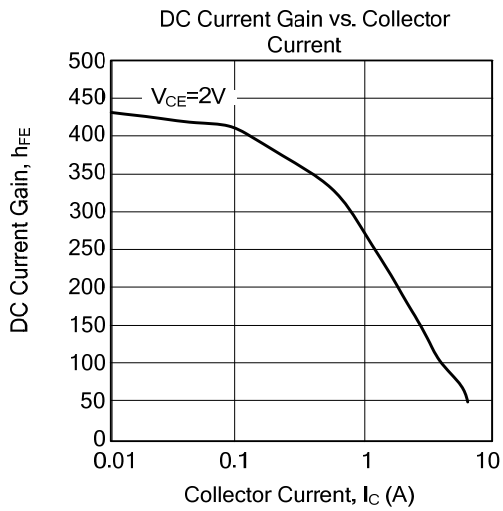
3. Assume the device is mounted and measured on a ceramic substrate 15x15x0.6mm.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise stated)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -100\mu\text{A}$	-20	-65		V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -10\text{mA}$ (Note)	-20	-55		V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -100\mu\text{A}$	-5	-8.8		V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -15\text{V}$			-100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -4\text{V}$			-100	nA
Collector Emitter Cut-Off Current	I_{CES}	$V_{CES} = -15\text{V}$			-100	nA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$ (Note)		-16	-40	mV
		$I_C = -1\text{A}$, $I_B = -20\text{mA}$ (Note)		-130	-200	mV
		$I_C = -1.5\text{A}$, $I_B = -50\text{mA}$ (Note)		-145	-220	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = -1.5\text{A}$, $I_B = -50\text{mA}$ (Note)		-0.87	-1.0	V
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	$V_{CE} = -2\text{V}$, $I_C = -2\text{A}$ (Note)		-0.81	-1.0	V
DC Current Gain	h_{FE}	$V_{CE} = -2\text{V}$, $I_C = -10\text{mA}$ (Note)	300	475		
		$V_{CE} = -2\text{V}$, $I_C = -100\text{mA}$ (Note)	300	450		
		$V_{CE} = -2\text{V}$, $I_C = -2\text{A}$, (Note)	150	230		
		$V_{CE} = -2\text{V}$, $I_C = -4\text{A}$, (Note)	35	70		
		$V_{CE} = -2\text{V}$, $I_C = -6\text{A}$, (Note)	15	30		
Transition Frequency	f_T	$V_{CE} = -10\text{V}$, $I_C = -50\text{mA}$, $f = 100\text{MHz}$	150	180		MHZ
Output Capacitance	C_{OB}	$V_{CB} = -10\text{V}$, $f = 1\text{MHz}$		21	30	pF
Turn-On Time	$t_{(ON)}$	$V_{CC} = -10\text{V}$, $I_C = -1\text{A}$		40		ns
Turn-Off Time	$t_{(OFF)}$	$I_{B1} = I_{B2} = -20\text{mA}$		670		ns

Note: Measured under pulsed conditions. Pulse width=300 μs . Duty cycle \leq 2%.

TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.