



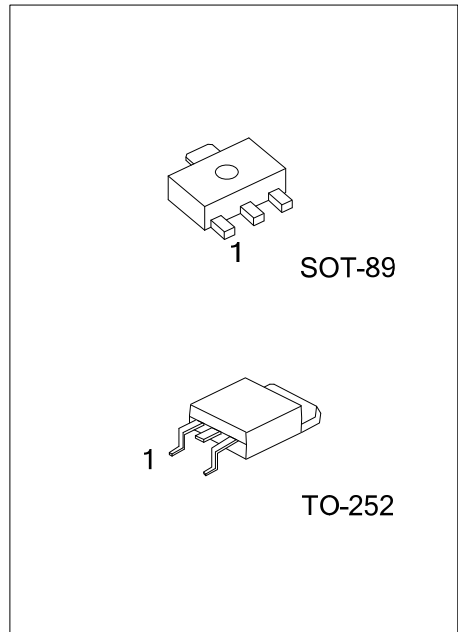
UN1066

NPN SILICON TRANSISTOR

HIGH SPEED SWITCHING TRANSISTOR

■ FEATURES

- * Low $V_{CE(SAT)}$ voltage, up to 3A
- * Suitable for fast switching applications
- * High current gain



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	UN1066G-AB3-R	SOT-89	B	C	E	Tape Reel
UN1066L-TN3-R	UN1066G-TN3-R	TO-252	B	C	E	Tape Reel

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

<p>UN1066G-AB3-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) T: Tube, R: Tape Reel (2) AB3: SOT-89, TN3: TO-252 (3) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING

SOT-89	TO-252
<p>UN1066G → Date Code</p>	<p>UTC UN1066 Lot Code ← → Data Code</p>

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

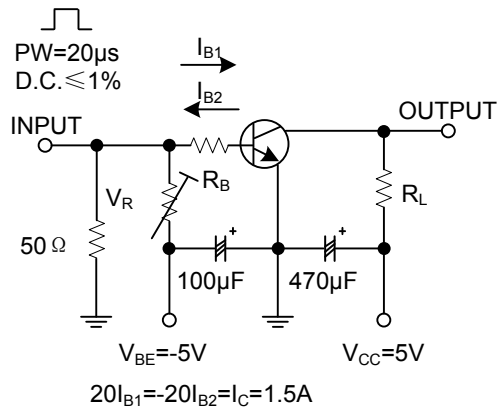
PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	BV_{CBO}	20	V
Collector to Emitter Voltage	BV_{CEO}	15	V
Emitter to Base Voltage	BV_{EBO}	5	V
Collector Current	I_C	6	A
Collector Current (Pulse)	I_{CP}	9	A
Base Current	I_B	600	mA
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	3.5	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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.

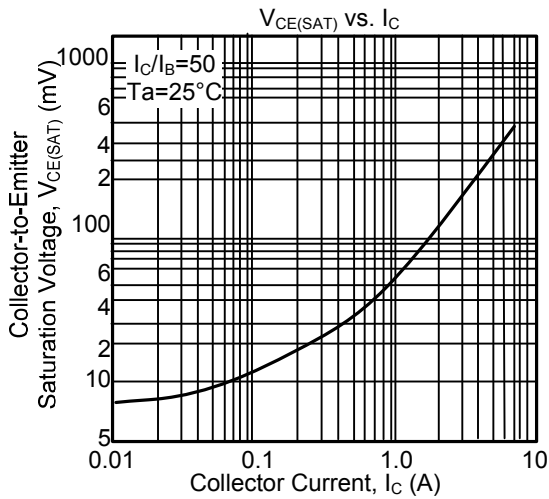
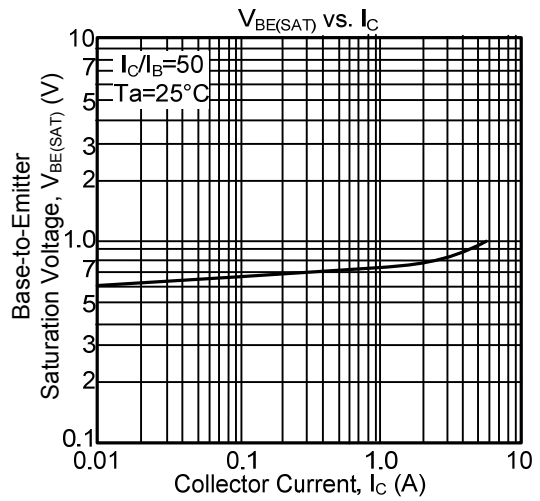
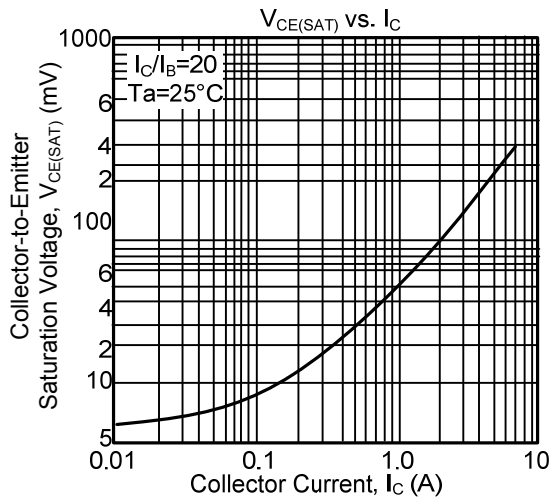
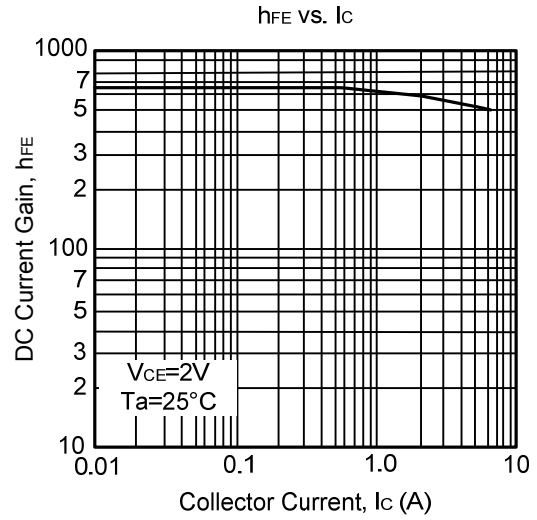
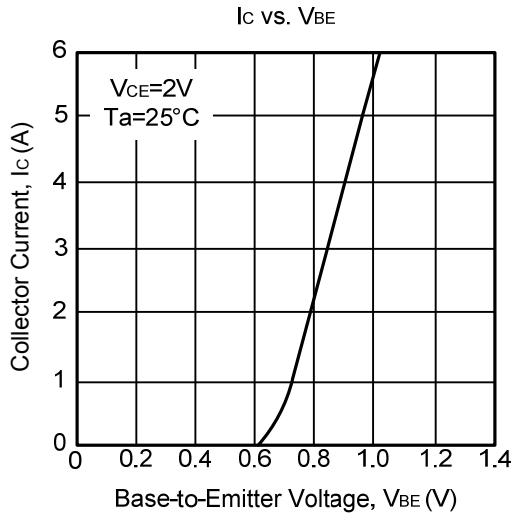
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Breakdown Voltage	BV_{CBO}	$I_C=10\mu\text{A}$, $I_E=0$	20			V
Collector to Emitter Breakdown Voltage	BV_{CEO}	$I_C=1\text{mA}$, $R_{BE}=\infty$	15			V
Emitter to Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu\text{A}$, $I_C=0$	5			V
Collector-to-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=1.5\text{A}$, $I_B=30\text{mA}$			180	mV
		$I_C=3\text{A}$, $I_B=60\text{mA}$			300	mV
Base-to-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=1.5\text{A}$, $I_B=30\text{mA}$			1.2	V
Collector Cutoff Current	I_{CBO}	$V_{CB}=12\text{V}$, $I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}$, $I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=0.5\text{V}$, $I_C=5\text{A}$	250			
Gain-Bandwidth Product	f_T	$V_{CE}=2\text{V}$, $I_C=500\text{mA}$	100			MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $f=1\text{MHz}$			50	pF
Turn-on Time	t_{ON}	Refer to Test Circuit			50	ns
Storage Time	t_{STG}	Refer to Test Circuit			250	ns
Fall Time	t_F	Refer to Test Circuit			25	ns

■ TEST CIRCUIT



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. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.