



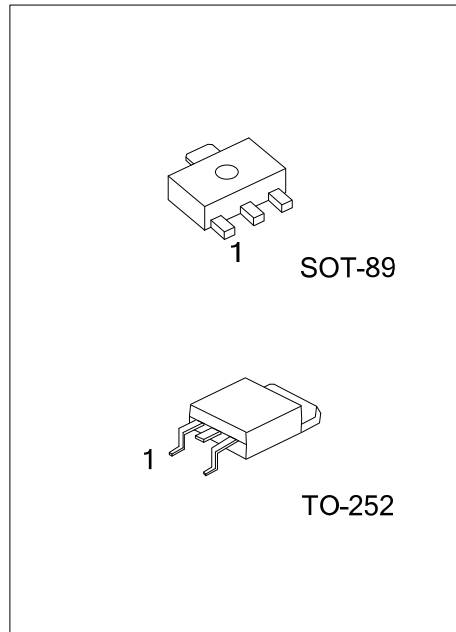
UN1066

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>1</p>	<p>UTC UN1066G → L: Lead Free G: Halogen Free □□□□□□ → Data Code</p> <p>Lot Code ← □□□□□□</p> <p>1</p>

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

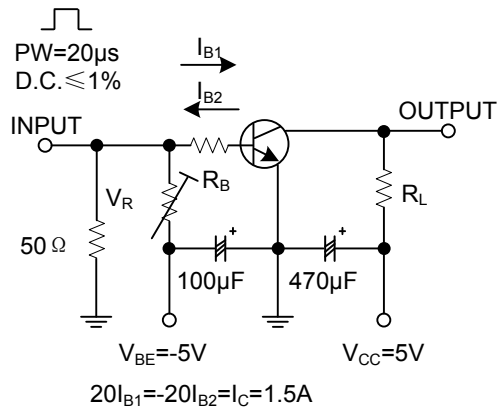
PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	BV_{CBO}	20	V
Collector to Emitter Voltage	BV_{CEO}	15	V
Emitter to Base Voltage	BV_{EBO}	5	V
Collector Current	I_C	6	A
Collector Current (Pulse)	I_{CP}	9	A
Base Current	I_B	600	mA
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	3.5	W
Junction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

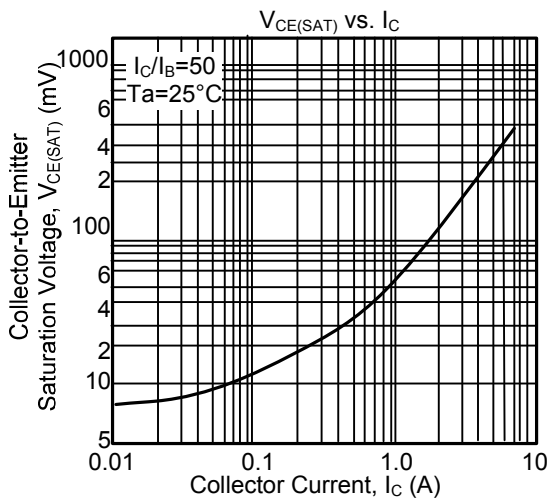
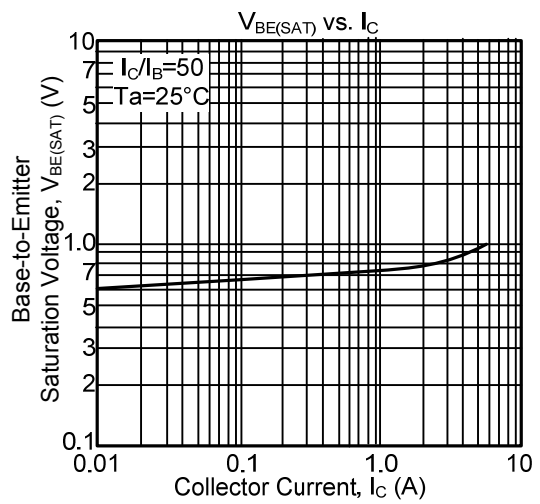
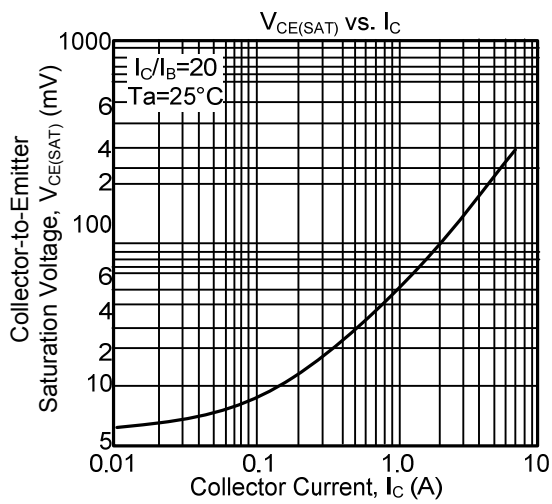
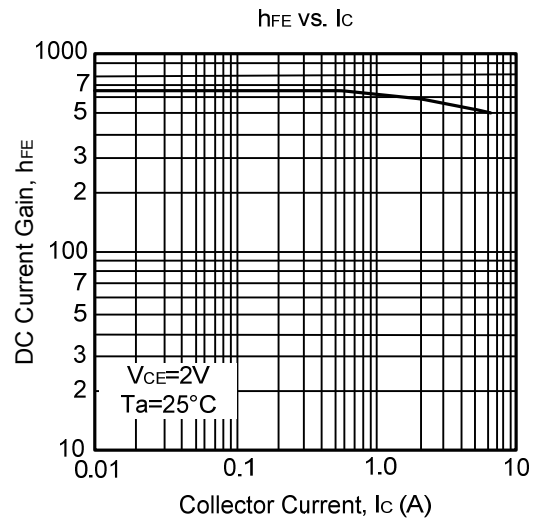
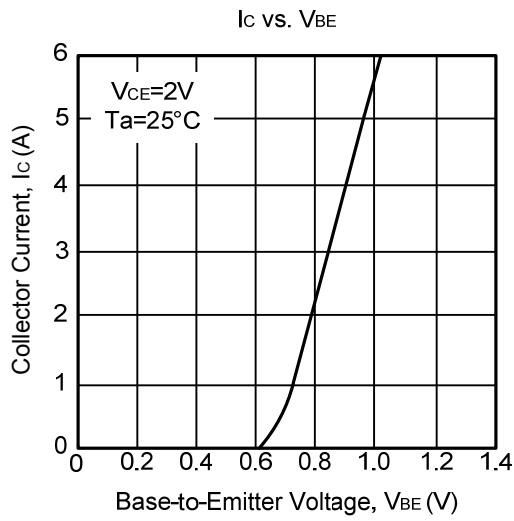
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

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



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