



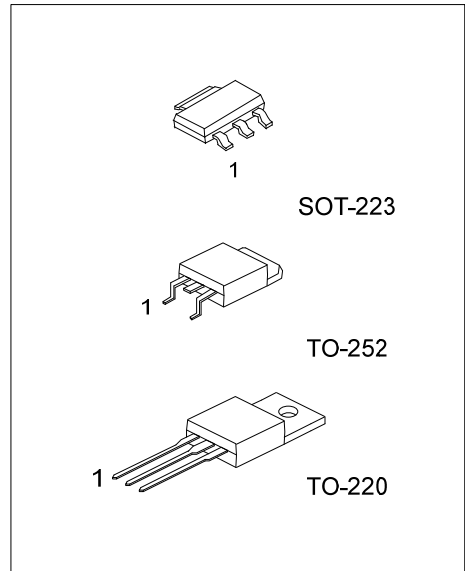
# HJ44H11

## NPN SILICON TRANSISTOR

### NPN EPITAXIAL PLANAR TRANSISTOR

#### DESCRIPTION

The UTC **HJ44H11** is designed for such applications as: series, shunt and switching regulators; output and driver stages of amplifiers operating at frequencies from DC to greater than 1MHz; low and high frequency inverters/converters; and many others.



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
HJ44H11L-AA3-R	HJ44H11G-AA3-R	SOT-223	B	C	E	Tape Reel
HJ44H11L-TA3-T	HJ44H11G-TA3-T	TO-220	B	C	E	Tube
HJ44H11L-TN3-R	HJ44H11G-TN3-R	TO-252	B	C	E	Tape Reel
HJ44H11L-TN3-T	HJ44H11G-TN3-T	TO-252	B	C	E	Tube

<p>HJ44H11L-AA3-R</p> <p>(1)Packing Type (2)Package Type (3)Lead Free</p>	<p>(1) R: Tape Reel, T: Tube (2) AA3: SOT-223, TA3: TO-220, TN3: TO-252 (3) G: Halogen Free, L: Lead Free</p>
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■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

PARAMETER		SYMBOL	RATINGS	UNIT
Collector- Emitter Voltage		$V_{CEO}$	80	V
Collector-Emitter Voltage		$V_{CES}$	80	V
Emitter-Base Voltage		$V_{EBO}$	5	V
Collector Current		$I_C$	8	A
Base Current		$I_B$	5	A
Power Dissipation ( $T_C=25^\circ\text{C}$ )	SOT-223	$P_D$	5	W
	TO-220		65	
	TO-252		20	
Junction Temperature		$T_J$	+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-55~+150	$^\circ\text{C}$

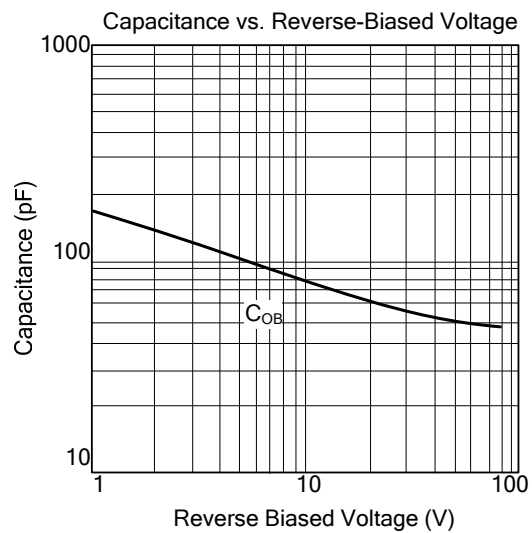
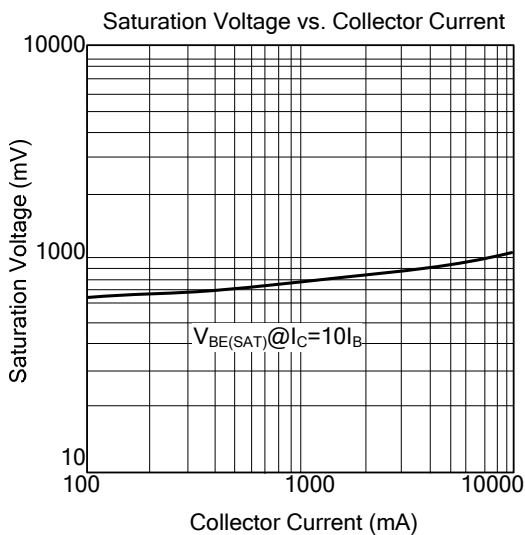
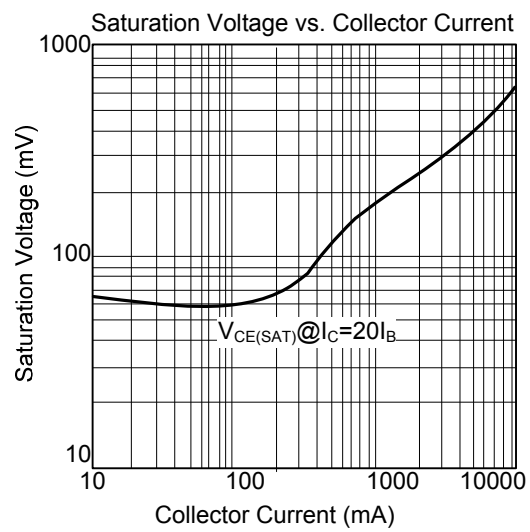
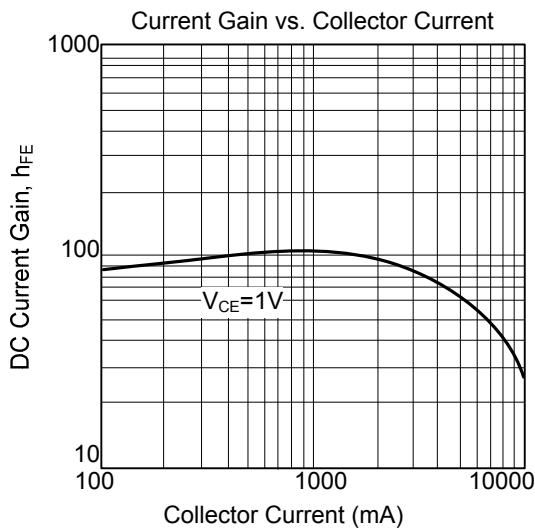
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=30\text{mA}, I_B=0$	80			V
Collector-Emitter Breakdown Voltage	$BV_{CES}$	$I_C=1\text{mA}, I_B=0$	80			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=1\text{mA}, I_C=0$	5			V
Collector Cut-Off Current	$I_{CES}$	$V_{CB}=80\text{V}, V_{EB}=0$			10	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			50	$\mu\text{A}$
Collector-Emitter Saturation Voltage(Note)	$V_{CE(SAT)}$	$I_C=8\text{A}, I_B=0.4\text{A}$			1	V
Base-Emitter Saturation Voltage(Note)	$V_{BE(SAT)}$	$I_C=8\text{A}, I_B=0.8\text{A}$			1.5	V
DC Current Gain (Note)	$h_{FE1}$	$V_{CE}=1\text{V}, I_C=2\text{A}$	60			
	$h_{FE2}$	$V_{CE}=1\text{V}, I_C=4\text{A}$	40			
Output Capacitance	$C_{OB}$	$V_{CB}=10\text{V}$		130		pF
Transition Frequency	$f_T$	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=20\text{MHz}$		50		MHz

Note: Pulse Test: Pulse Width  $\leq 380\mu\text{s}$ , Duty Cycle  $\leq 2\%$

■ TYPICAL CHARACTERISTICS



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