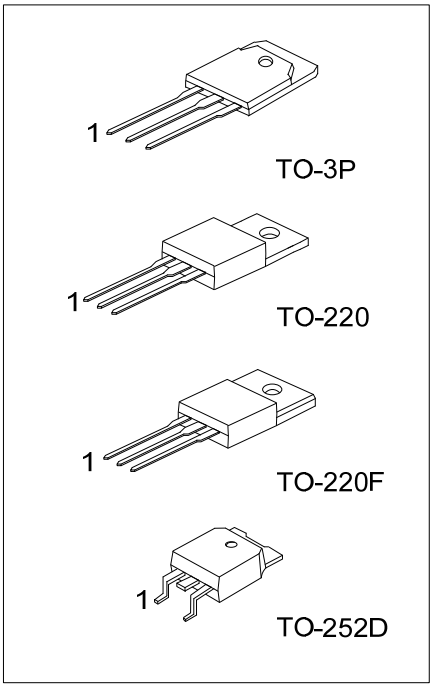
2SC3834

NPN SILICON TRANSISTOR

SWITCH NPN TRANSISTOR



■ DESCRIPTION

The UTC **2SC3834** is an epitaxial planar type NPN silicon transistor.

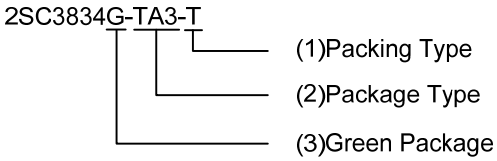
■ FEATURES

* Humidifier, DC-DC converter, and general purpose

■ ORDERING INFORMATION

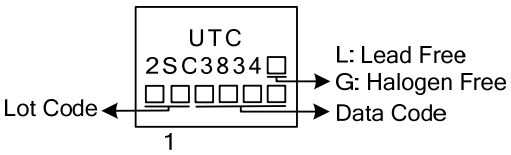
Ordering Number		Package	Pin Assignment			Packing
Lead Free Plating	Halogen Free		1	2	3	
2SC3834L-TA3-T	2SC3834G-TA3-T	TO-220	B	C	E	Tube
2SC3834L-TF3-T	2SC3834G-TF3-T	TO-220F	B	C	E	Tube
2SC3834L-TND-R	2SC3834G-TND-R	TO-252D	B	C	E	Tape Reel
2SC3834L-T3P-T	2SC3834G-T3P-T	TO-3P	B	C	E	Tube

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



(1) T: Tube
(2) TA3: TO-220, TF3: TO-220F, TND: TO-252, T3P: TO-3P
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	200	V
Collector-emitter voltage		V_{CEO}	120	V
Emitter-Base Voltage		V_{EBO}	8	V
Collector Current (Pulse)		I_C	7	A
Base Current		I_B	3	A
Collector Dissipation (T_C=25°C)	TO-220	P_C	60	W
	TO-220F		27	W
	TO-252D		30	W
	TO-3P		65	W
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

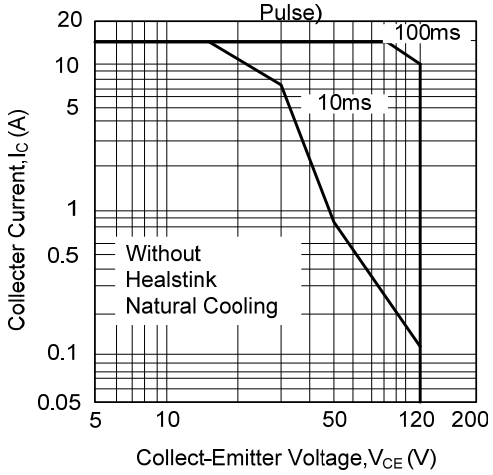
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

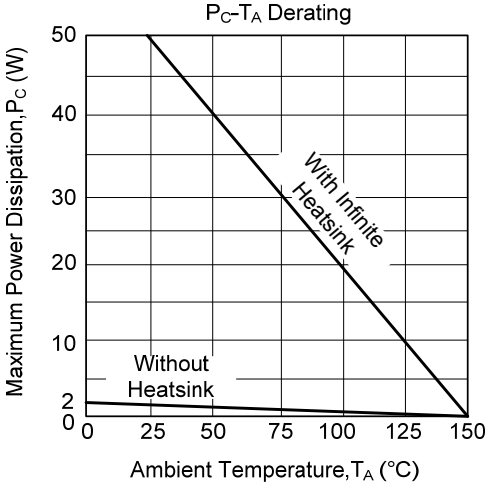
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C= 50mA	120			V
Collector Cutoff Current	I_{CBO}	V_{CB}=200V, I_E=0A			100	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=8V, I_C=0A			100	μA
DC Current Gain (Note)	h_{FE}	V_{CE}=4V, I_C=3A	70		220	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=3A, I_B=0.3A			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=3A, I_B=0.3A			1.2	V
Current Gain Bandwidth Product	f_T	I_E=-0.5mA, V_{CE}=12V, f=100MHz		30		MHz
Output Capacitance	C	V_{CB}=10 V, I_E=0A, f=1MHz		110		pF

■ TYPICAL CHARACTERISTICS

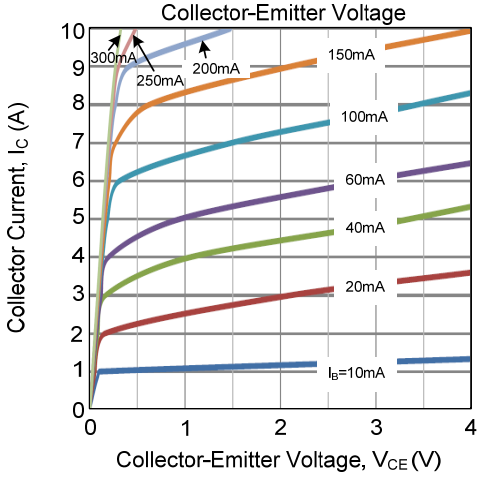
Safe Operating Area (Single Pulse)



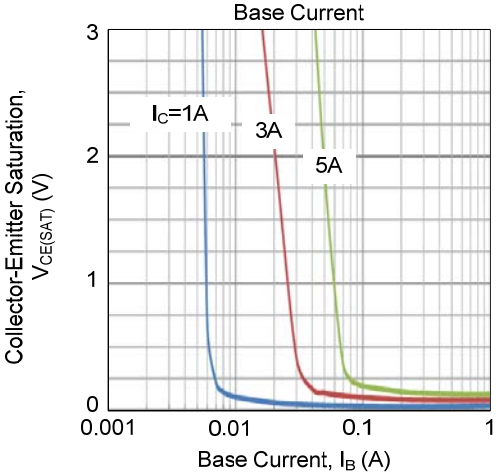
P_C-T_A Derating



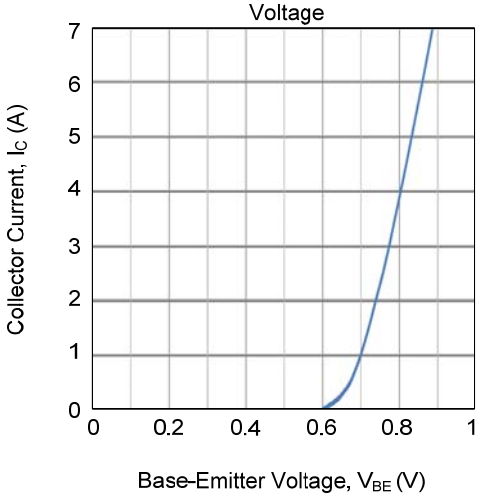
Typical Collector Current vs. Collector-Emitter Voltage



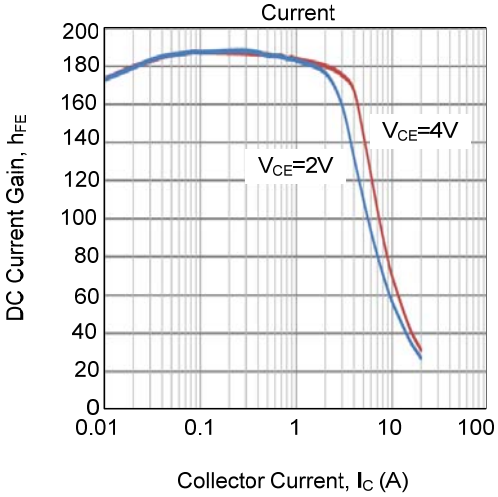
Collector-Emitter Saturation vs. Base Current



Collector-Current vs. Base-Emitter Voltage



DC Current Gain vs. Collector Current



■ TYPICAL CHARACTERISTICS