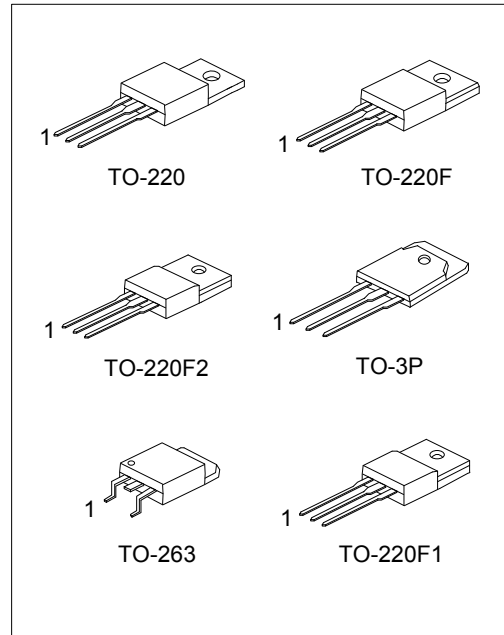




### SWITCHING REGULATOR APPLICATIONS

#### FEATURES

- \* High Speed.
- \* High Breakdown Voltage ( $V_{CBO}=1400V$ ).
- \* High Reliability.



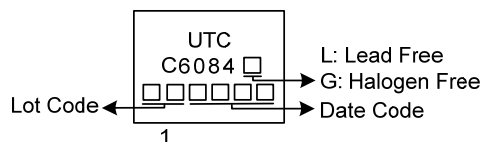
#### ORDERING INFORMATION

Ordering Number		Package	Pin Description			Packing
Lead Free	Halogen Free		1	2	3	
C6084L-x-TA3-T	C6084G-x-TA3-T	TO-220	B	C	E	Tube
C6084L-x-TF3-T	C6084G-x-TF3-T	TO-220F	B	C	E	Tube
C6084L-x-TF1-T	C6084G-x-TF1-T	TO-220F1	B	C	E	Tube
C6084L-x-TF2-T	C6084G-x-TF2-T	TO-220F2	B	C	E	Tube
C6084L-x-TQ2-T	C6084G-x-TQ2-T	TO-263	B	C	E	Tube
C6084L-x-TQ2-R	C6084G-x-TQ2-R	TO-263	B	C	E	Tape Reel
C6084L-x-T3P-T	C6084G-x-T3P-T	TO-3P	B	C	E	Tube

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

<p>C6084G-x-TA3-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Rank</p> <p>(4) Green Package</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TF1: TO-220F1, TF2: TO-220F2 TF3: TO-220F, TQ2: TO-263, T3P: TO-3P</p> <p>(3) x: refer to Classification of <math>h_{FE1}</math></p> <p>(4) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING



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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CBO}$	1.4	KV
Collector-Emitter Voltage		$V_{CEO}$	700	V
Emitter-Base Voltage		$V_{EBO}$	9	V
Collector Current	TO-3P/TO-263 TO-220/TO-220F TO-220F1/TO-220F2	$I_C$	3	A
	TO-3P/TO-263 TO-220/TO-220F TO-220F1/TO-220F2	$I_{CP}$	6	A
Collector Dissipation ( $T_A=25^\circ\text{C}$ )	TO-220/ TO-263	$P_C$	1.75	W
	TO-220F		1.35	W
	TO-220F1/TO-220F2		1.45	W
	TO-3P		3.125	W
Collector Dissipation ( $T_C=25^\circ\text{C}$ )	TO-220/ TO-263	$P_C$	80	W
	TO-220F		30	W
	TO-220F1/TO-220F2		32	W
	TO-3P		100	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.

■ THERMAL DATA

PARAMETER		SYMBOL	RATING	UNIT
Junction to Ambient	TO-220/ TO-263	$\theta_{JA}$	71.4	$^\circ\text{C/W}$
	TO-220F		92.6	$^\circ\text{C/W}$
	TO-220F1/TO-220F2		86.2	$^\circ\text{C/W}$
	TO-3P		40	$^\circ\text{C/W}$
Junction to Case	TO-220/ TO-263	$\theta_{JC}$	1.56	$^\circ\text{C/W}$
	TO-220F		4.17	$^\circ\text{C/W}$
	TO-220F1/TO-220F2		3.9	$^\circ\text{C/W}$
	TO-3P		1.25	$^\circ\text{C/W}$

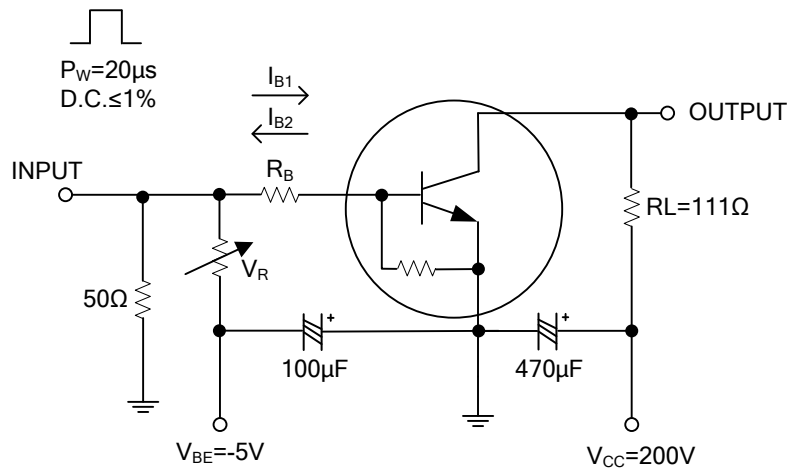
■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=800\text{V}, I_E=0\text{A}$			10	$\mu\text{A}$
Collector Cutoff Current	$I_{CES}$	$V_{CE}=1400\text{V}, R_{BE}=0\Omega$			1.0	mA
Collector Sustain Voltage	$V_{CEO(SUS)}$	$I_C=10\text{mA}, I_B=0\text{A}$	700			V
Emitter Cutoff Current	$I_{EBO}$	$V_{BE}=4\text{V}, I_C=0\text{A}$			1.0	mA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=2.7\text{A}, I_B=0.54\text{A}$			3	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=2.7\text{A}, I_B=0.54\text{A}$			1.5	V
DC Current Gain	$h_{FE1}$	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	10		25	
	$h_{FE2}$	$V_{CE}=5\text{V}, I_C=2.0\text{A}$	5			
Fall Time	$T_F$	$I_C=1.8\text{A}, I_{B1}=0.36\text{A}, I_{B2}=-0.72\text{A}$			0.2	$\mu\text{S}$
Collector Output Capacitance	$C_{ob}$	$V_{CB}=0\text{V}, f=1\text{MHz}$		206		pF
		$V_{CB}=10\text{V}, f=1\text{MHz}$		52.8		pF

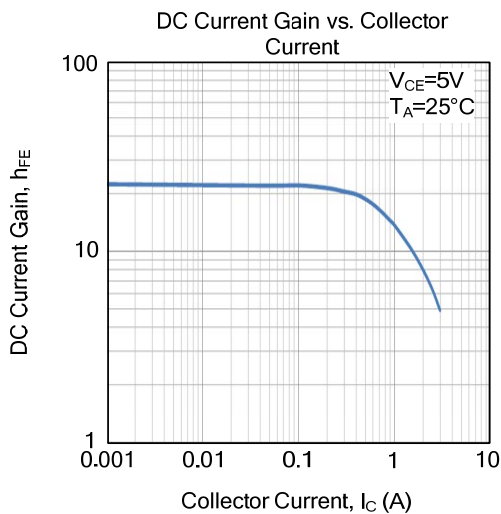
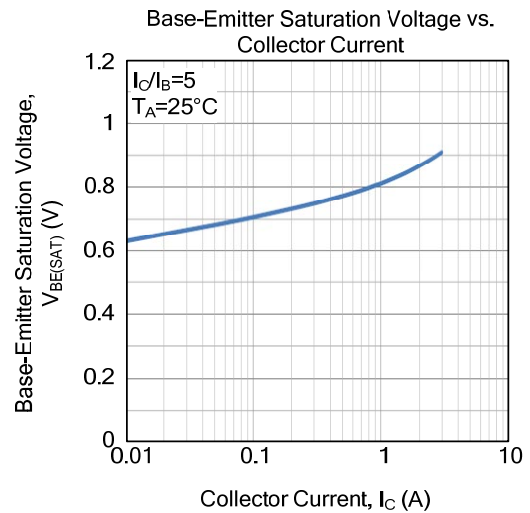
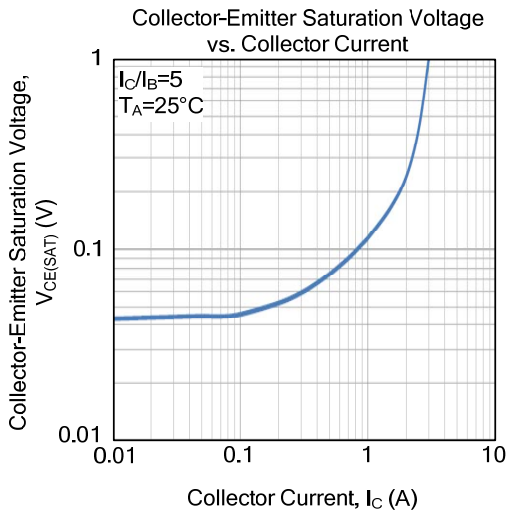
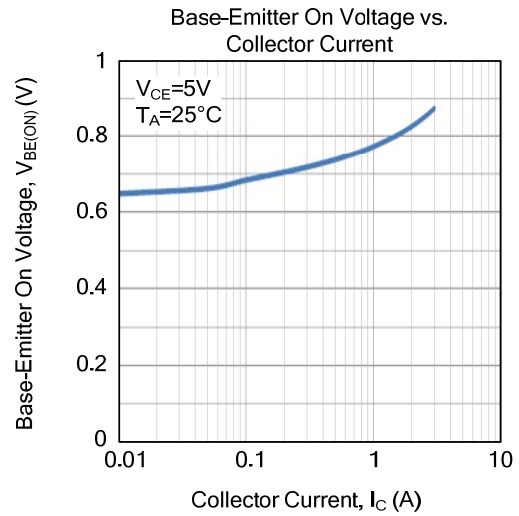
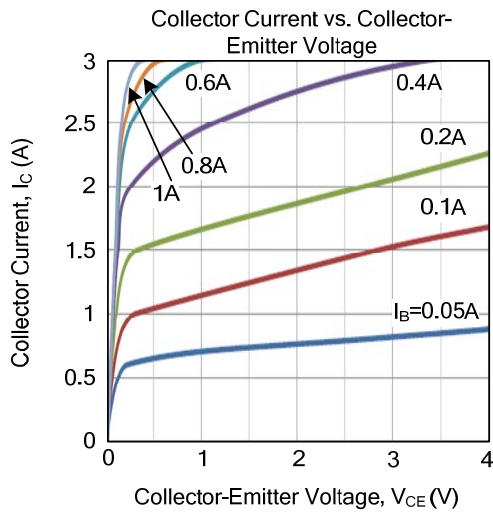
■ CLASSIFICATION OF  $h_{FE1}$

RANK	A	B	C
RANGE	10 ~ 15	15 ~ 20	20 ~ 25

## ■ TEST CIRCUIT



### TYPICAL CHARACTERISTICS



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