



UP1752

NPN SILICON TRANSISTOR

HIGH CURRENT LOW $V_{CE(SAT)}$ TRANSISTOR

DESCRIPTION

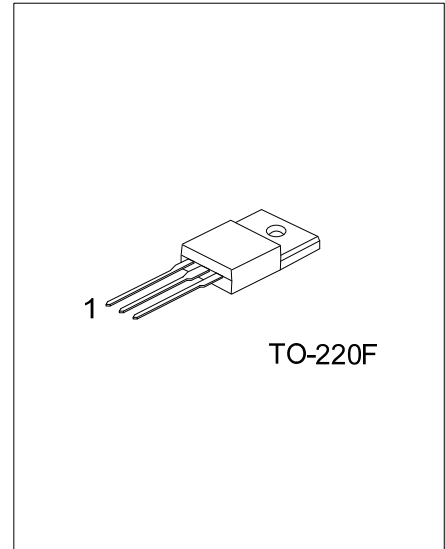
The UTC **UP1752** is specially designed to have high current and low $V_{CE(SAT)}$ to suit for power amplifier application and power switching application.

FEATURES

*Low Collector-Emitter Saturation Voltage:

$V_{CE(SAT)} = 300\text{mV (Max.) @ 4.0A}$

* BV_{CEO} is 100V minimum



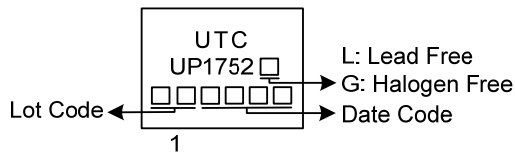
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UP1752L-x-TF3-T	UP1752G-x-TF3-T	TO-220F	B	C	E	Tube

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

<p>UP1752G-x-TF3-T</p>	<p>(1) T: Tube (2) TF3: TO-220F (3) x: refer to Classification of h_{FE} (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	6	V
Continuous Collector Current	I_C	6	A
Continuous Base Current	I_B	0.5	A
Collector Power Dissipation ($T_C=25^{\circ}\text{C}$)	P_C	30	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.

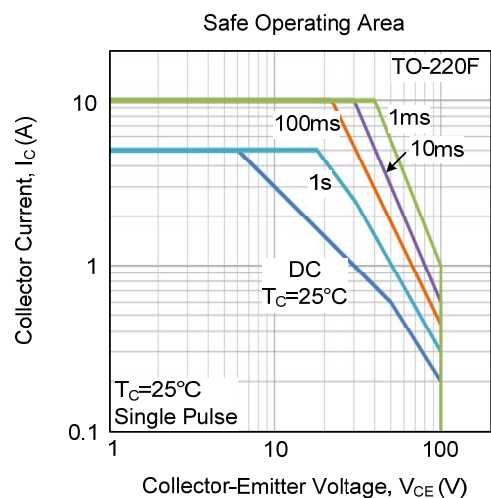
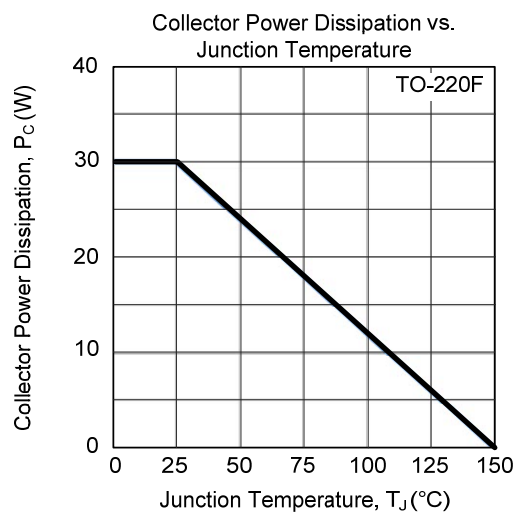
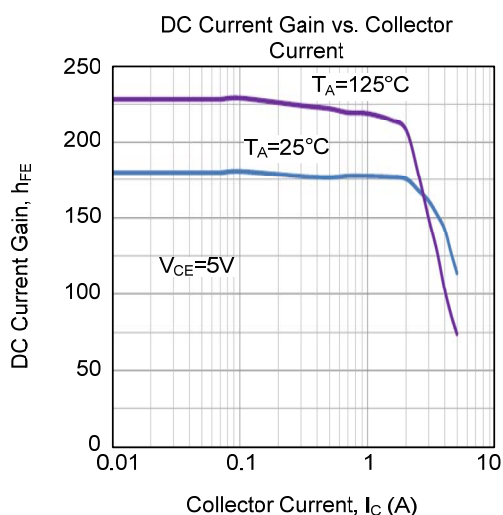
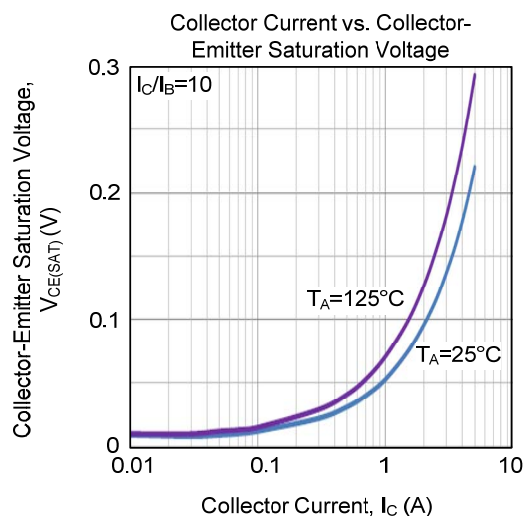
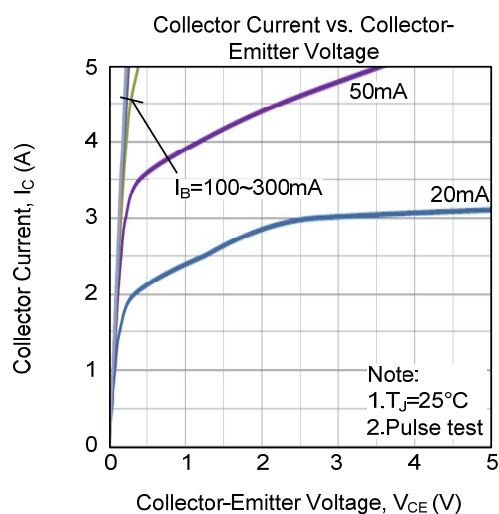
■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=50\text{mA}$, $I_B=0$	100			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=100\text{V}$, $I_E=0$			10	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$			10	nA
DC Current Gain	h_{FE1}	$V_{CE}=5\text{V}$, $I_C=1\text{A}$	70		240	
	h_{FE2}	$V_{CE}=5\text{V}$, $I_C=4\text{A}$	20			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_B=0.4\text{A}$, $I_C=4\text{A}$			300	mV
Base-Emitter Voltage	V_{BE}	$V_{CE}=5\text{V}$, $I_C=1\text{A}$			1100	mV
Transition Frequency	f_T	$V_{CE}=5\text{V}$, $I_C=1\text{A}$		30		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		40		pF

■ CLASSIFICATION OF h_{FE1}

RANK	O	Y
RANGE	70 ~ 140	120 ~ 240

TYPICAL CHARACTERISTICS



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