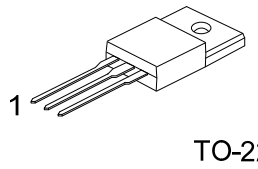
UP1752

NPN SILICON TRANSISTOR

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



TO-220F

■ 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:
$V_{CE(SAT)}$ = 300mV (Max.) @ 4.0A
* BV_{CEO} is 100V minimum

■ ORDERING INFORMATION

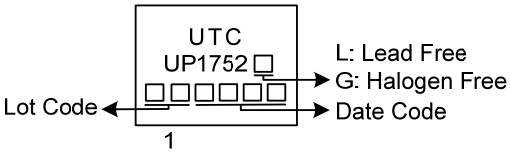
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UP1752L-x-TF3-T	UP1752G-x-TF3-T	TO-220F	B	C	E	Tube

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

UP1752G-x-TF3-T
(1)Packing Type
(2)Packing Type
(3)Rank
(4)Green Package

(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

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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°C)	P_C	30	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, I_B=0	100			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=100V, I_E=0			10	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5V, I_C=0			10	nA
DC Current Gain	h_{FE1}	V_{CE}=5V, I_C=1A	70		240	
	h_{FE2}	V_{CE}=5V, I_C=4A	20			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_B=0.4A, I_C=4A			300	mV
Base-Emitter Voltage	V_{BE}	V_{CE}=5V, I_C=1A			1100	mV
Transition Frequency	f_T	V_{CE}=5V, I_C=1A		30		MHz
Collector Output Capacitance	Cob	V_{CB}=10V, I_E=0, f=1MHz		40		pF

■ CLASSIFICATION OF h_{FE1}

RANK	O	Y
RANGE	70 ~ 140	120 ~ 240

■ TYPICAL CHARACTERISTICS