



2SC4552

NPN SILICON TRANSISTOR

BIPOLAR SILICON NPN POWER TRANSISTOR

DESCRIPTION

The UTC **2SC4552** is a power transistor developed for high-speed switching and features low $V_{CE(SAT)}$ and high h_{FE} . This transistor is ideal for use in drivers such as DC/DC converters and actuators. In addition, a small resin-molded insulation type package contributes to high-density mounting and reduction of mounting cost.

FEATURES

* Collector-Emitter Sustaining Voltage:

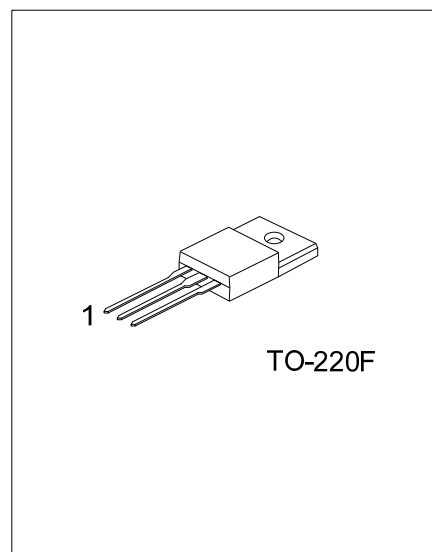
$V_{CE(SUS)} = 60V$ (Min.)

* High DC Current Gain:

$h_{FE} = 100$ (Min.) @ ($V_{CE} = 2V$, $I_C = 3A$)

* Low Saturation Voltage:

$V_{CE(SAT)} = 0.3V$ (Max.) @ ($I_C = 8A$, $I_B = 0.4A$)



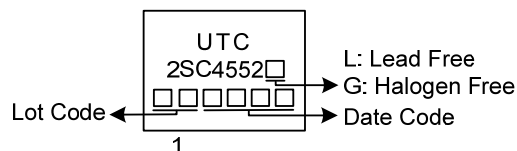
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC4552L-x-TF3-T	2SC4552G-x-TF3-T	TO-220F	B	C	E	Tube

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

<p>2SC4552G-x-TF3-T</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</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}	60	V
Emitter-Base Voltage	V_{EBO}	7	V
Continuous Collector Current	I_C	15	A
Pulse Collector Current	I_{CM}	30	A
Continuous Base Current	I_B	7.5	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 ($T_J=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1\text{mA}$, $I_B=0$	60			V
Collector-Emitter Sustaining Voltage	BV_{CEX}	$I_C=1\text{mA}$, $V_{BE(OFF)}=-1.5\text{V}$	60			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60\text{V}$, $I_E=0$			10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$			10	μA
Cut-Off Current	I_{CER}	$V_{CB}=60\text{V}$, $R_{BE}=50\Omega$, $T_A=125^\circ\text{C}$			1.0	mA
Cut-Off Current	I_{CEX}	$V_{CB}=60\text{V}$, $V_{EB(OFF)}=-1.5\text{V}$			10	μA
		$V_{CB}=60\text{V}$, $V_{EB(OFF)}=-1.5\text{V}$, $T_A=125^\circ\text{C}$			1.0	mA
DC Current Gain	h_{FE1}	$V_{CE}=2\text{V}$, $I_C=1.5\text{A}$	100			
	h_{FE2}	$V_{CE}=2\text{V}$, $I_C=3\text{A}$	100		400	
	h_{FE3}	$V_{CE}=2\text{V}$, $I_C=8\text{A}$	60			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=8\text{A}$, $I_B=0.4\text{A}$			0.5	V
		$I_C=12\text{A}$, $I_B=0.6\text{A}$			0.8	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=8\text{A}$, $I_B=0.4\text{A}$			1.3	V
		$I_C=12\text{A}$, $I_B=0.6\text{A}$			1.7	V

■ CLASSIFICATION OF h_{FE2}

RANK	M	L	K
RANGE	100 ~ 200	150 ~ 300	200 ~ 400

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