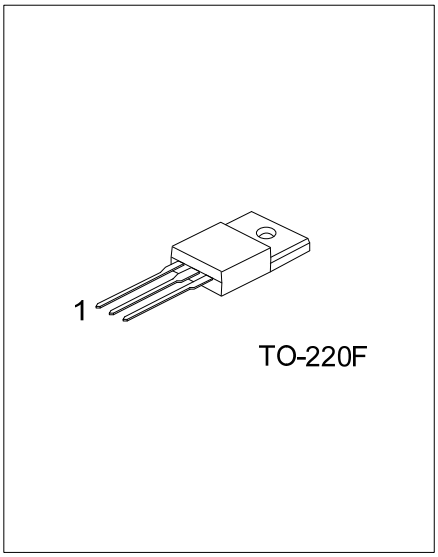
2SC4552

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 hFE. 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:
  $V_{CEO(SUS)}$= 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

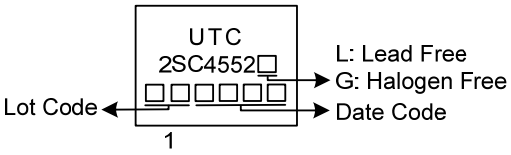
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC4552L-x-TF3-T	2SC4552G-x-TF3-T	TO-220F	B	C	E	Tube

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

2SC4552G-x-TF3-T
(1)Packing Type
(2)Package 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}	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°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_J=25°C, unless otherwise specified)

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

■ CLASSIFICATION OF h_{FE2}

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