

## TO-220 Plastic-Encapsulate Transistors

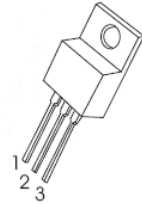
### 2SC4544 TRANSISTOR (NPN)

#### FEATURES

- High voltage:  $V_{(BR)CEO} = 300\text{ V}$
- Small collector output capacitance:  $C_{ob} = 3.0\text{ pF (typ.)}$
- Collector metal (fin) is fully covered with mold resin.

#### TO-220

1. BASE
2. COLLECTOR
3. EMITTER



#### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

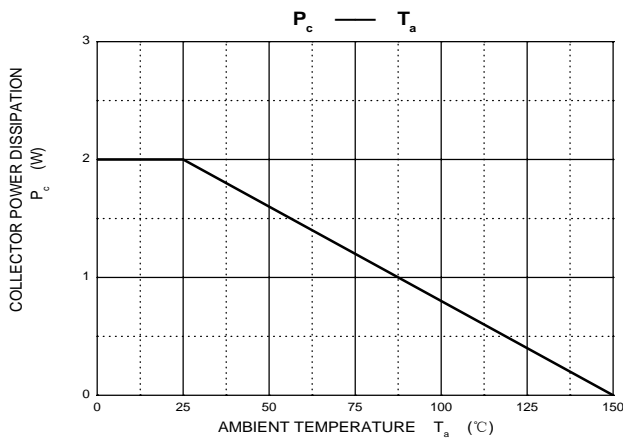
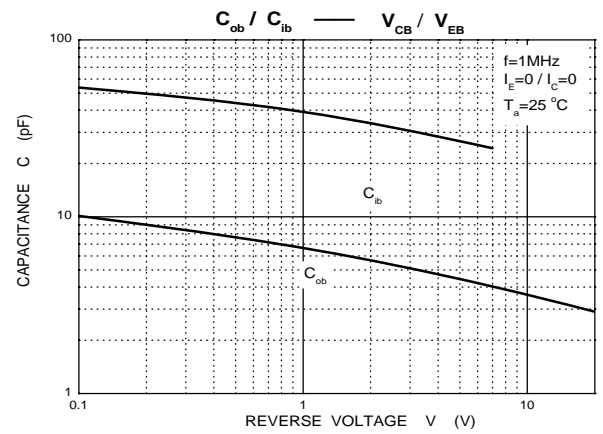
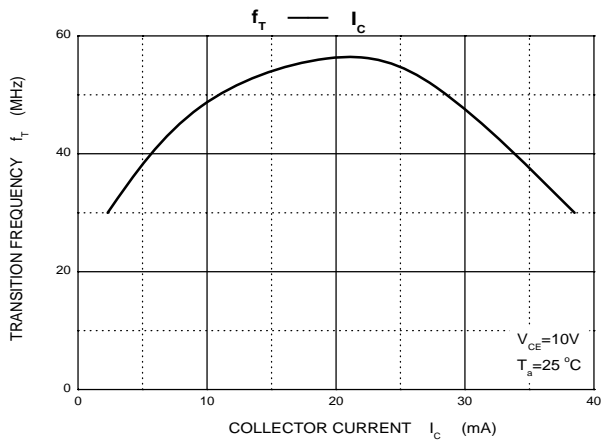
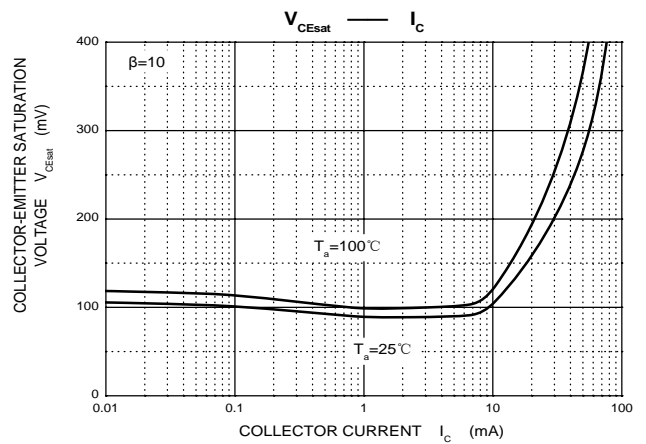
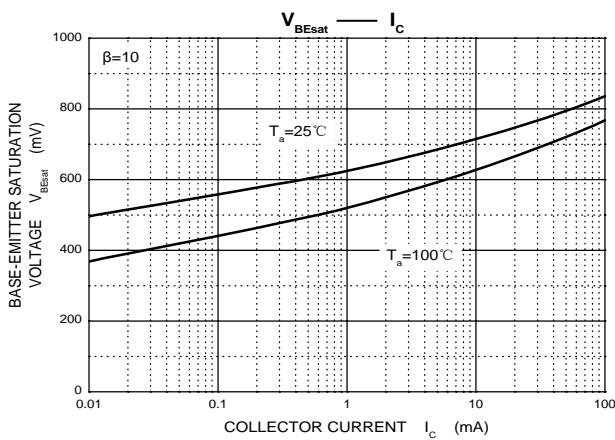
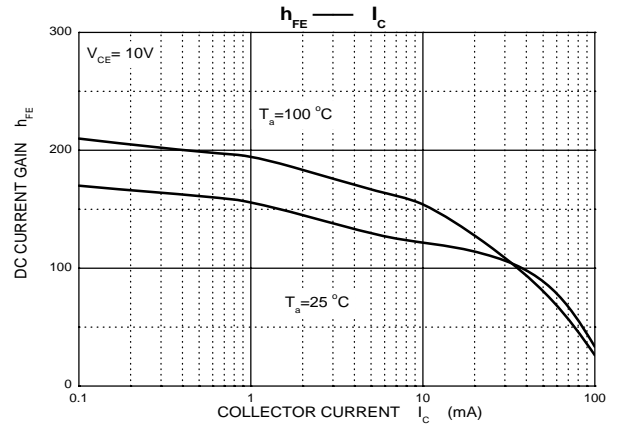
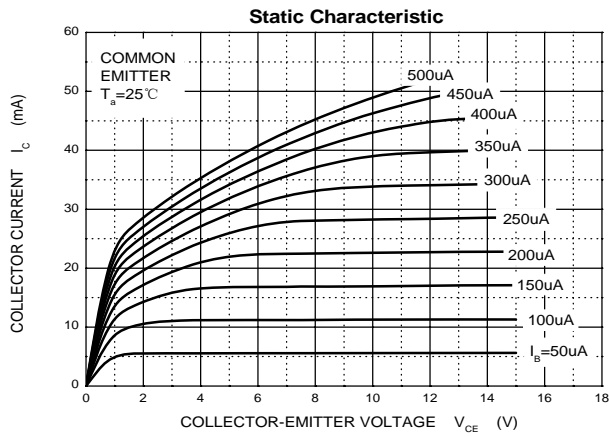
Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	300	V
$V_{CEO}$	Collector-Emitter Voltage	300	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current -Continuous	0.1	A
$P_C$	Collector Power Dissipation	2	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$

#### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

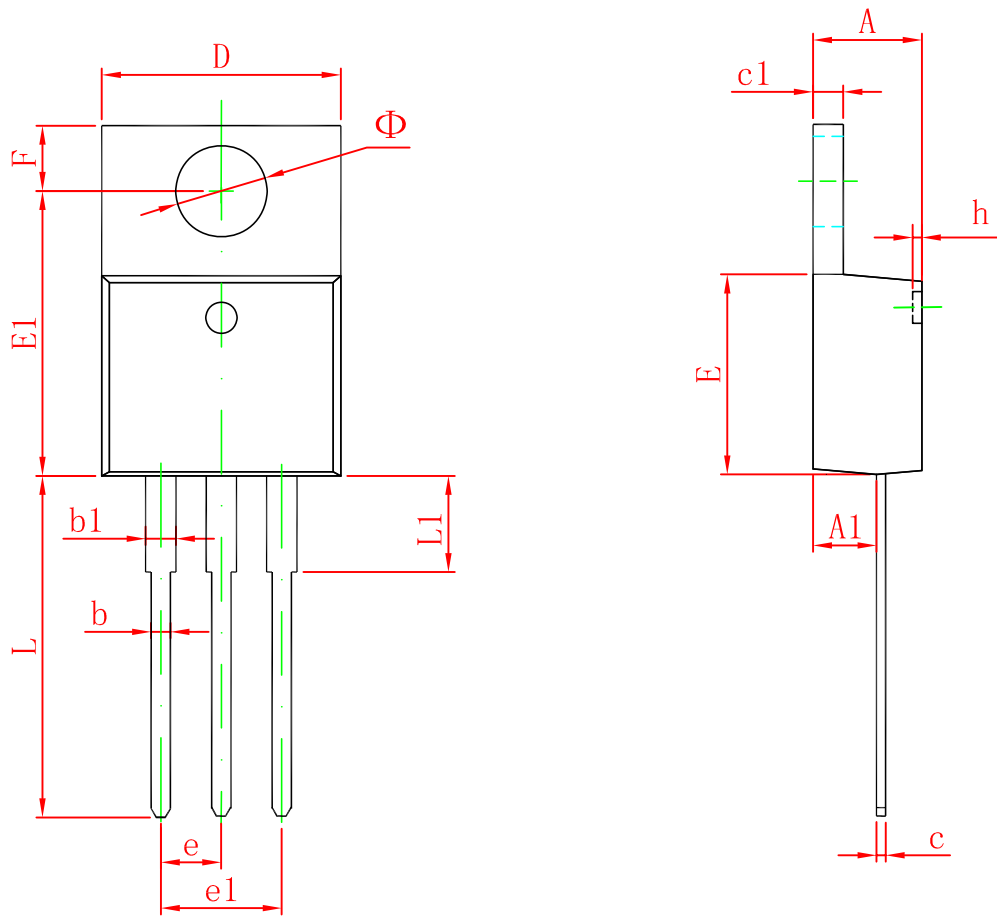
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	300			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	300			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	7			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=240\text{V}, I_E=0$			1.0	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=7\text{V}, I_C=0$			1.0	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}, I_C=4\text{mA}$	20			
	$h_{FE(2)}$	$V_{CE}=10\text{V}, I_C=20\text{mA}$	30		200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1.0	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=20\text{mA}$	50	70		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=20\text{V}, I_E=0, f=1\text{MHz}$		3.0		pF

# Typical Characteristics

# 2SC4544



# TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
$\Phi$	3.735	3.935	0.147	0.155