

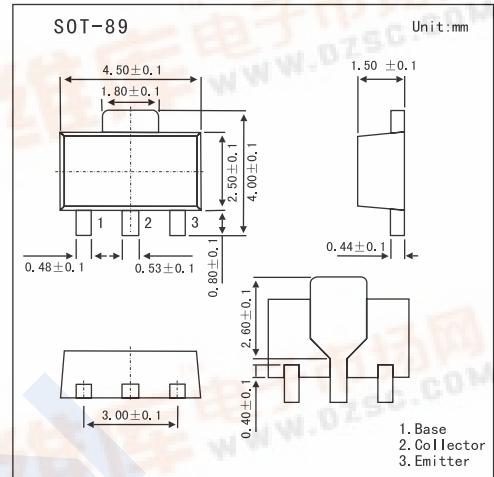
SMD Type Transistors

High-Voltage Driver Applications

2SC4548

Features

- High Breakdown Voltage
- Adoption of MBIT Process
- Excellent hFE Linearity.



Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	400	V
Collector-Emitter Voltage	V <sub>CEO</sub>	400	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	I <sub>C</sub>	200	mA
Collector Current (Pulse)	I <sub>CP</sub>	400	mA
Collector Power Dissipation	P <sub>C</sub> *	1.3	W
Jumction temperature	T <sub>j</sub>	150	°C
Storage temperature Range	T <sub>stg</sub>	-55 to +150	°C

\* Mounted on ceramic board (250 mm<sup>2</sup> x 0.8 mm)

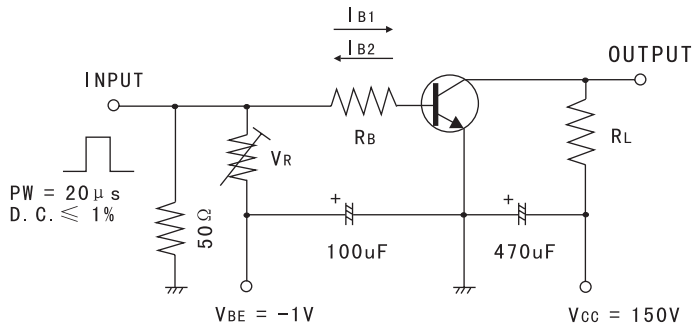
Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> = 300V, I <sub>E</sub> = 0			0.1	μA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> = 4V, I <sub>C</sub> = 0			0.1	μA
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 10μA, I <sub>E</sub> = 0	400			V
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1mA, R <sub>BE</sub> = ∞	400			V
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> = 0	5			V
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 50mA	60		200	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 50mA, I <sub>B</sub> = 5mA			0.8	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 50mA, I <sub>B</sub> = 5mA			1	V
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = 30V, I <sub>C</sub> = 10mA		70		MHz
Collector Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 30V, I <sub>E</sub> = 0, f = 1MHz		5		pF
Reverse Transfer Capacitance	C <sub>re</sub>	V <sub>CB</sub> = 30V, I <sub>E</sub> = 0, f = 1MHz		4		pF
Turn-On Time	t <sub>on</sub>	See Test Circuit.		0.25		μs
Turn-Off Time	t <sub>off</sub>			5.0		



## 2SC4548

### Test Circuit



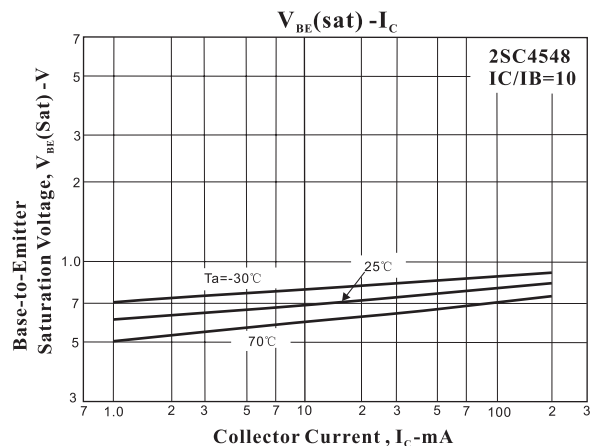
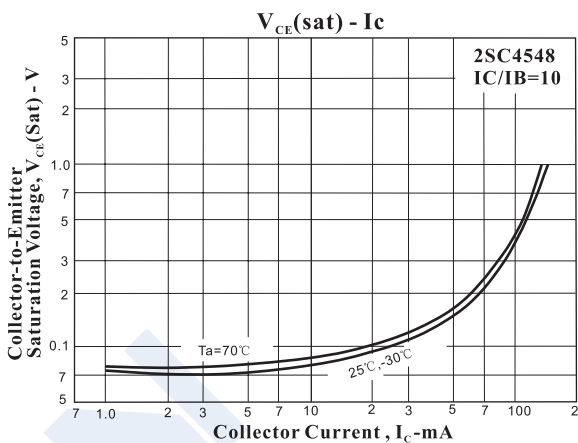
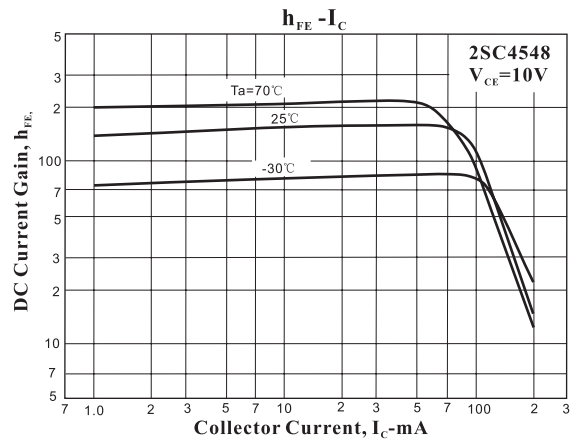
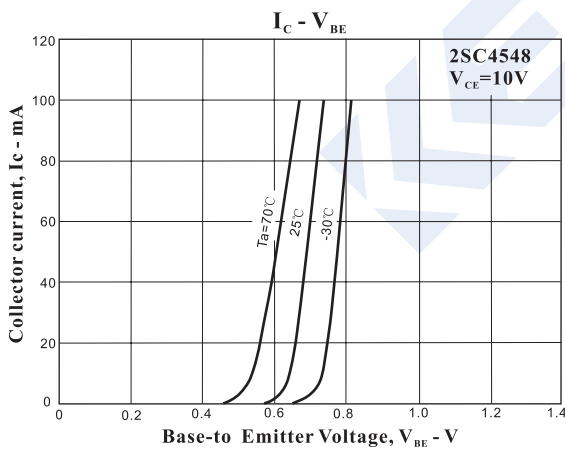
$$10 I_{B1} = -10 I_{B2} = I_C = 50\text{mA}$$

$$R_L = 3\text{k}\Omega, R_B = 200\Omega \text{ at } I_C = 50\text{mA}$$

### hFE Classification

Marking	CN	
Rank	D	E
hFE	60 ~ 120	100 ~ 200

### Electrical Characteristics Curves



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