

High-voltage Switching Transistor (400V, 5A)

2SC5532

●Features

- 1) Low $V_{CE(sat)}$. (Typ. 0.6V at $I_C / I_B = 5/1A$)
- 2) High switching speed. (t_f : Max. 1 μ s at $I_C=4A$)
- 3) Wide SOA (safe operating area).

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	400	V
Collector-emitter voltage	V_{CEO}	400	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	5	A
	I_{CP}	7	A *
Collector power dissipation	P_C	30	W (Tc = 25°C)
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~+150	°C

* Single pulse, $P_w = 100ms$.

●Packaging specifications and h_{FE}

Type	2SC5532
Package	TO-220FN
h_{FE}	AB
Code	-
Basic ordering unit (pieces)	500

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	400	-	-	V	$I_C = 50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	400	-	-	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	7	-	-	V	$I_E = 50\mu A$
Collector cutoff current	I_{CBO}	-	-	10	μA	$V_{CB} = 400V$
Emitter cutoff current	I_{EBO}	-	-	10	μA	$V_{EB} = 5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	1	V	$I_C/I_B = 5A/1A$ *
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	1.5	V	$I_C/I_B = 5A/1A$ *
DC current transfer ratio	h_{FE}	16	-	50	-	$V_{CE}/I_C = 5V/2A$
Transition frequency	f_T	-	15	-	MHz	$V_{CB} = 10V$, $I_E = -0.5A$, $f = 5MHz$ *
Output capacitance	C_{ob}	-	80	-	pF	$V_{CB} = 10V$, $I_E = 0A$, $f = 1MHz$
Turn-on time	t_{on}	-	-	1	μs	$I_C = 4A$, $R_L = 50\Omega$
Storage time	t_{stg}	-	-	2.5	μs	$I_{B1} = -I_{B2} = 0.4A$
Fall time	t_f	-	-	1	μs	$V_{CC} \approx 200V$

* Measured using pulse current.