

# Power Transistor (80V, 4A)

## 2SC4008

### ●Features

- 1) Low  $V_{CE(sat)}$ . (Typ. 0.3V at  $I_C/I_B=2/0.2A$ )
- 2) Excellent DC current gain characteristics.
- 3)  $P_C=30W$  ( $T_C=25^\circ C$ )
- 4) Wide SOA (safe operating area).
- 5) Complements the 2SA1635.

### ●Packaging specifications and hFE

Type	2SC4008
Package	TO-220FP
hFE	EFG
Code	—
Basic ordering unit (pieces)	500

### ●Absolute maximum ratings ( $T_a=25^\circ C$ )

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	100	V
Collector-emitter voltage	$V_{CEO}$	80	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	4	A (DC)
		6	A (Pulse) *
Collector power dissipation	$P_C$	2	W
		30	W ( $T_C=25^\circ C$ )
Junction temperature	$T_J$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55~150	$^\circ C$

\* Single pulse  $P_w=100ms$

### ●Electrical characteristics ( $T_a=25^\circ C$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	100	—	—	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	80	—	—	V	$I_C=25mA$
Emitter-base breakdown voltage	$BV_{EBO}$	6	—	—	V	$I_E=50\mu A$
Collector cutoff current	$I_{CBO}$	—	—	10	$\mu A$	$V_{CB}=100V$
Emitter cutoff current	$I_{EBO}$	—	—	10	$\mu A$	$V_{EB}=6V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	1	V	$I_C/I_B=2A/0.2A$ *
Base-emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	$I_C/I_B=2A/0.2A$ *
DC current transfer ratio	hFE	100	—	500	—	$V_{CE}/I_C=4V/1A$
Transition frequency	$f_T$	—	10	—	MHz	$V_{CE}=12V, I_E=-0.2A, f=5MHz$ *
Output capacitance	$C_{ob}$	—	60	—	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

\* Measured using pulse current.