

# High-voltage Switching Transistor (Power Supply) (120V, 7A)

2SC4849

## ●Features

- 1) Low saturation voltage, typically  $V_{CE(sat)} = 0.17$  at  $I_c / I_b = 5A / 0.5A$ .
- 2) High switching speed, typically  $t_f = 0.17 \mu s$  at  $I_c = 5A$ .
- 3) Wide SOA. (safe operating area)

●Packaging specifications and  $h_{FE}$ 

Type	2SC4849
Package	TO-220FP
$h_{FE}$	E
Code	—
Basic ordering unit (pieces)	500

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	$V_{CE(sus)}$	125	—	—	V	$I_{CP}=8A, I_{B1}=-I_{B2}=0.5A, I_C=5A, L=200\mu H$ clamped
Collector cutoff current	$I_{CEO}$	—	—	10	$\mu A$	$V_{CB}=100V$
Collector cutoff current	$I_{EBO}$	—	—	10	$\mu A$	$V_{EB}=12V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.6	V	$I_c/I_b=5A/0.5A$
Base-emitter saturation voltage	$V_{BE(sat)}$	—	—	1.2	V	$I_c/I_b=5A/0.5A$
DC current transfer ratio	$h_{FE}$	100	—	200	—	$V_{CE}/I_c=5V/3A$
Transition frequency	$f_T$	—	20	—	MHz	$V_{CE}=10V, I_e=-0.5A$
Output capacitance	$C_{OB}$	—	150	—	pF	$V_{CE}=10V, I_e=0A, f=1MHz$
Turn-on time	$t_{on}$	—	—	0.5	$\mu s$	$I_c=5A, R_i=10\Omega$
Storage time	$t_{off}$	—	—	2.5	$\mu s$	$I_{B1}=-I_{B2}=0.5A$
Fall time	$t_f$	—	—	0.5	$\mu s$	$V_{CC}=50V$
Collector cutoff current	$I_{CEO}$	—	—	2	mA	$V_{CE}=100V, T_a=125^\circ C$

(94L-712-C342)

# Medium Power Transistor (Chroma Output) (300V, 0.1A)

2SC5147

## ●Features

- 1) High breakdown voltage. ( $BV_{CEO}=300V$ )
- 2) Low collector output capacitance. (Typ. 3pF at  $V_{CB}=30V$ )
- 3) Wide SOA. (safe operating area)
- 4) Ideal for color TV chroma output and amplification of video signals.

●Packaging specifications and  $h_{FE}$ 

Type	2SC5147
Package	TO-220FN
$h_{FE}$	DE
Code	—
Basic ordering unit (pieces)	500

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	300	—	—	V	$I_c=50\mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	300	—	—	V	$I_c=100\mu A$
Emitter-base breakdown voltage	$BV_{EBO}$	5	—	—	V	$I_e=50\mu A$
Collector cutoff current	$I_{CEO}$	—	—	0.5	$\mu A$	$V_{CB}=200V$
Emitter cutoff current	$I_{EBO}$	—	—	0.5	$\mu A$	$V_{EB}=4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.2	1	V	$I_c/I_b=50mA/5mA$
DC current transfer ratio	$h_{FE}$	60	—	200	—	$V_{CE}/I_c=10V/10mA$
Transition frequency	$f_T$	50	100	—	MHz	$V_{CE}=30V, I_e=-20mA, f=30MHz$
Output capacitance	$C_{OB}$	—	3	—	pF	$V_{CE}=30V, I_e=0A, f=1MHz$

\* Measured using pulse current.

(94L-736-C258)