

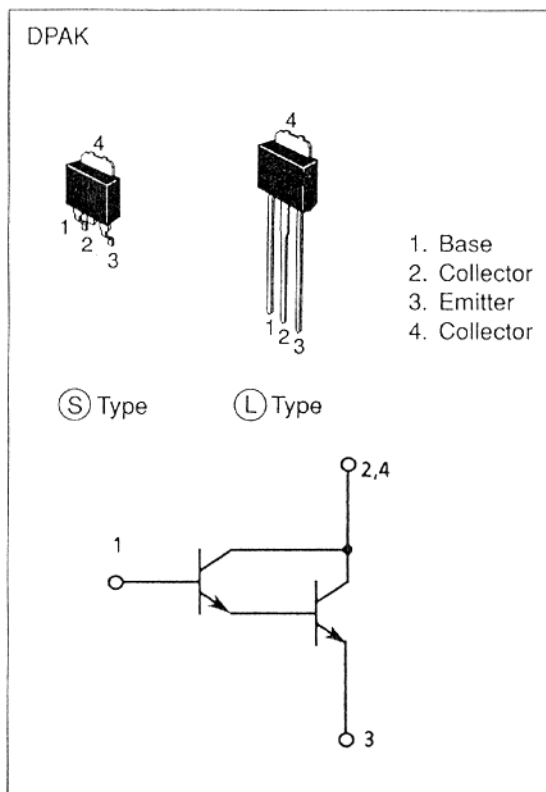
2SC4500 (L)/(S)

Silicon NPN Epitaxial
Low Frequency Amplifier

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	60	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	1	A
Collector peak current	$i_{C(peak)}$	2	A
Collector power dissipation	P_C	0.8	W
	P_C^{*1}	8	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Note: 1. Value at $T_C = 25^\circ\text{C}$.

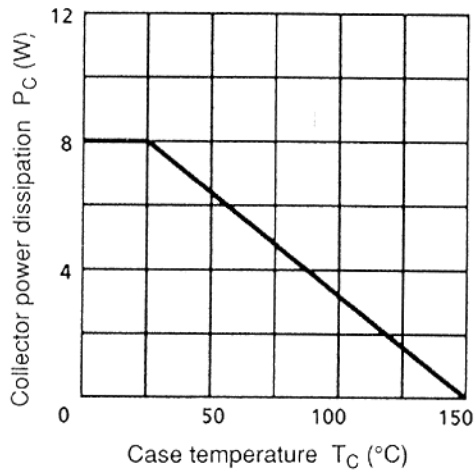


Electrical Characteristics (Ta = 25°C)

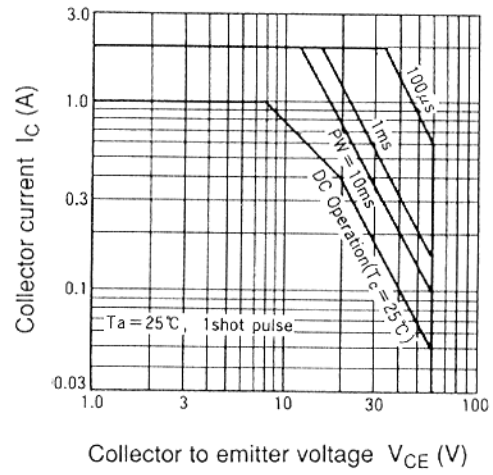
Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	60	—	—	V	$I_C = 1 \text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 0.1 \text{ mA}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	10	μA	$V_{CB} = 60 \text{ V}$, $I_E = 0$
DC current transfer ratio	h_{FE}	2000	—	—		$V_{CE} = 10 \text{ V}$, $I_C = 500 \text{ mA}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.5	V	$I_C = 500 \text{ mA}$, $I_B = 0.5 \text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	2.0	V	$I_C = 500 \text{ mA}$, $I_B = 0.5 \text{ mA}^{*1}$
Turn on time	t_{on}	—	100	—	ns	$V_{CC} = 12 \text{ V}$, $I_C = 250 \text{ mA}$, $I_{B1} = -I_{B2} = 5 \text{ mA}$
Turn off time	t_{off}	—	600	—	ns	

Note: 1. Pulse Test.

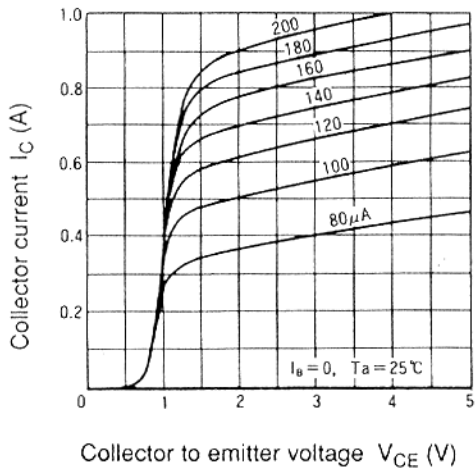
Maximum Collector Dissipation Curve



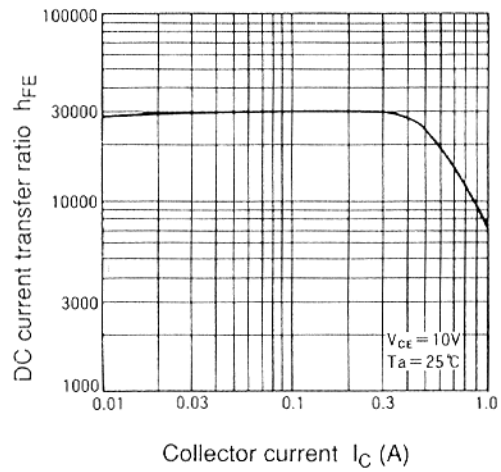
Area of Safe Operation



Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current



2SC4500 L/S

