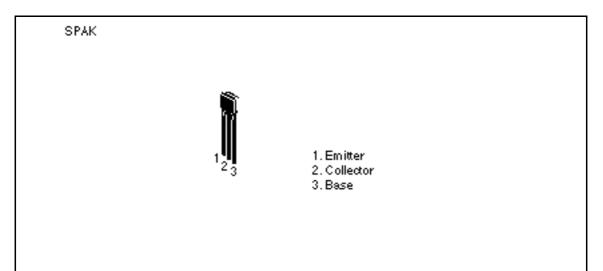
Silicon NPN Epitaxial

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Application

Low frequency amplifier, switching

Outline



Absolute Maximum Ratings ($Ta = 25^{\circ}C$)

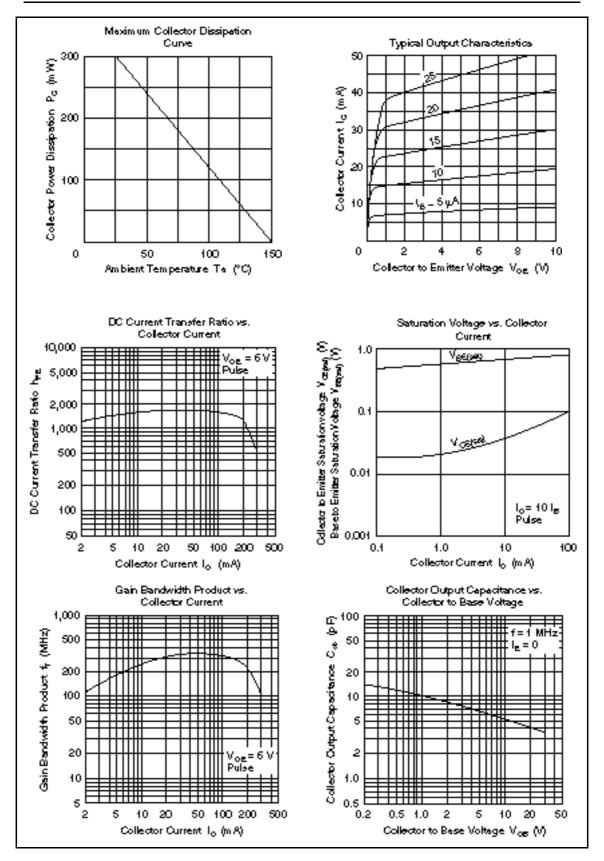
Item	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	60	V
Collector to emitter voltage	V _{CEO}	50	V
Emitter to base voltage	V_{EBO}	15	V
Collector current	I _c	300	mA
Collector power dissipation	P _c	300	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C



Electrical Characteristics (Ta = 25° C)

Item	Symbol	Min	Тур	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	60	_	_	V	$I_{\rm C} = 10 \ \mu A, \ I_{\rm E} = 0$
Collector to emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	50	_	_	V	$I_c = 1 \text{ mA}, \text{ R}_{\text{BE}} =$
Emitter to base breakdown voltage	$V_{(\text{BE})\text{EBO}}$	15	_	_	V	$I_{\rm E} = 10 \ \mu A, \ I_{\rm C} = 0$
Collector cutoff current	I _{CBO}	_	_	1	μA	$V_{\rm CB} = 50 \ V, \ I_{\rm E} = 0$
Base to emitter voltage	V_{BE}	_	_	0.75	V	$V_{ce} = 6 \text{ V}, \text{ I}_{c} = 1 \text{ mA}$
DC current transfer ratio	h _{FE1}	800	_	2000		$V_{ce} = 6 \text{ V}, \text{ I}_{c} = 100 \text{ mA}$ (pulse test)
	\mathbf{h}_{FE2}	500	_	_		$V_{ce} = 6 V, I_c = 1 mA$
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	_	_	0.3	V	$I_c = 300 \text{ mA}, I_B = 30 \text{ mA}$ (pulse test)

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