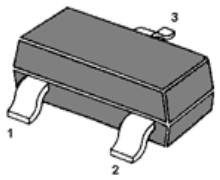
BCV26 / BCV46

PNP Silicon Epitaxial Planan Darling Transistors



1.Base 2.Emitter 3.Collector
SOT-23 Plastic Package

Applications

• For preamplifier input applications

Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Collector Base Voltage	BCV26 BCV46	$-V_{CBO}$	40 80	V
Collector Emitter Voltage	BCV26 BCV46	$-V_{CEO}$	30 60	V
Emitter Base Voltage		$-V_{EBO}$	10	V
Collector Current		$-I_C$	500	mA
Peak Collector Current		$-I_{CM}$	800	mA
Base Current		$-I_B$	100	mA
Total Power Dissipation		P_{tot}	200	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{Stg}	- 65 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient [1)]	$R_{\theta JA}$	625	℃/W

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout

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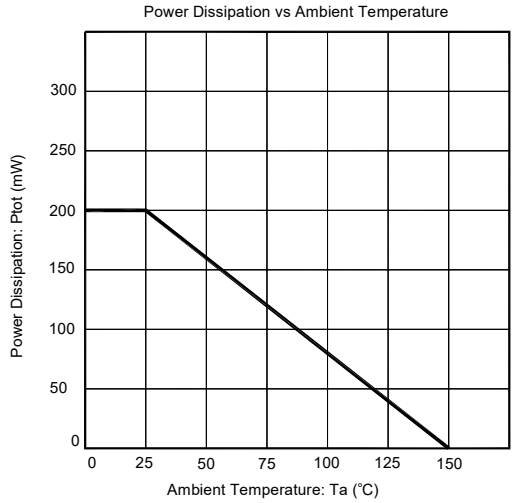
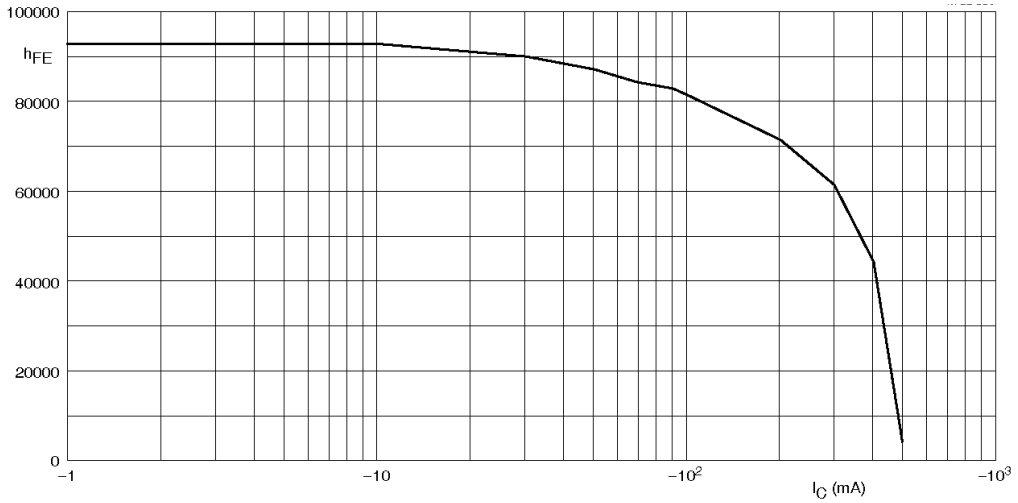
Characteristics at Ta = 25℃

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain						
at $-V_{CE}$ = 5 V, $-I_C$ = 1 mA	BCV26	h_{FE}	4000	-	-	-
	BCV46	h_{FE}	2000	-	-	-
at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA	BCV26	h_{FE}	10000	-	-	-
	BCV46	h_{FE}	4000	-	-	-
at $-V_{CE}$ = 5 V, $-I_C$ = 100 mA	BCV26	h_{FE}	20000	-	-	-
	BCV46	h_{FE}	10000	-	-	-
Collector Base Cutoff Current						
at $-V_{CB}$ = 30 V	BCV26	$-I_{CBO}$	-	-	100	nA
at $-V_{CB}$ = 60 V	BCV46		-	-	100	
Emitter Base Cutoff Current						
at $-V_{EB}$ = 10 V		$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage	BCV26		40	-	-	
at $-I_C$ = 100 µA	BCV46	$-V_{(BR)CBO}$	80	-	-	V
Collector Emitter Breakdown Voltage	BCV26		30			
at $-I_C$ = 10 mA	BCV46	$-V_{(BR)CEO}$	60	-	-	V
Emitter Base Breakdown Voltage						
at $-I_E$ = 10 µA		$-V_{(BR)EBO}$	10	-	-	V
Collector Emitter Saturation Voltage						
at $-I_C$ = 100 mA, $-I_B$ = 0.1 mA		$-V_{CE(sat)}$	-	-	1	V
Base Emitter Saturation Voltage						
at $-I_C$ = 100 mA, $-I_B$ = 0.1 mA		$-V_{BE(sat)}$	-	-	1.5	V
Base Emitter On-state Voltage						
at $-I_C$ = 10 mA, $-V_{CE}$ = 5 V		$-V_{BE(on)}$	-	-	1.4	V
Transition Frequency						
at $-V_{CE}$ = 5 V, $-I_C$ = 30 mA, f = 100 MHz		f_T	-	220	-	MHz

Electrical Characteristics Curves

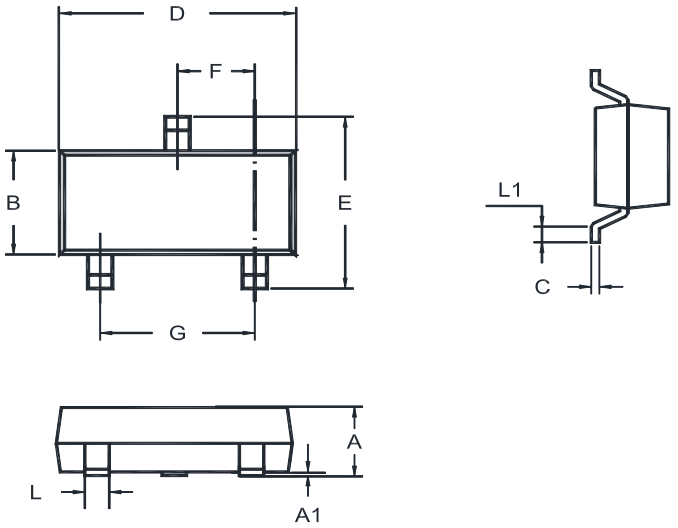




V_{CE} = −2 V.

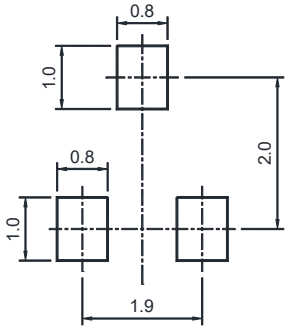
Fig.2 DC current gain; typical values.

Package Outline (Dimensions in mm) SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20 0.89	0.100 0.013	1.40 1.20	0.19 0.08	3.04 2.80	2.6 2.2	1.02 0.89	2.04 1.78	0.51 0.37	0.2 MIN

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" XK " = Part No.

" YM " = Date Code Marking

" Y " = Year

" M " = Month

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