

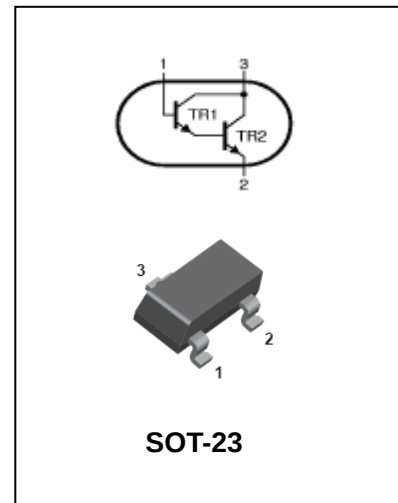
NPN Darlington Amplifier Transistor

BCV27/BCV47

FEATURES

- Complementary to BCV26, BCV46.
- High collector current.
- High current gain.
- For general AF applications.
- Complementary types:BCV26,BCV46

HF



APPLICATIONS

- NPN silicon darlington transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
BCV27	FF	SOT-23
BCV47	FG	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	BCV27	BCV47	Units
V_{CBO}	Collector-Base Voltage	40	80	V
V_{CEO}	Collector-Emitter Voltage	30	60	V
V_{EBO}	Emitter-Base Voltage	10	10	V
I_C	Collector Current -DC	500		mA
I_{CM}	Collector Current –Peak	800		mA
I_B	Base Current -DC	100		mA
I_{BM}	Base Current –Peak	200		mA
P_C	Collector Dissipation	350		mW
T_j, T_{stg}	Junction and Storage Temperature	-65 to +150		°C

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

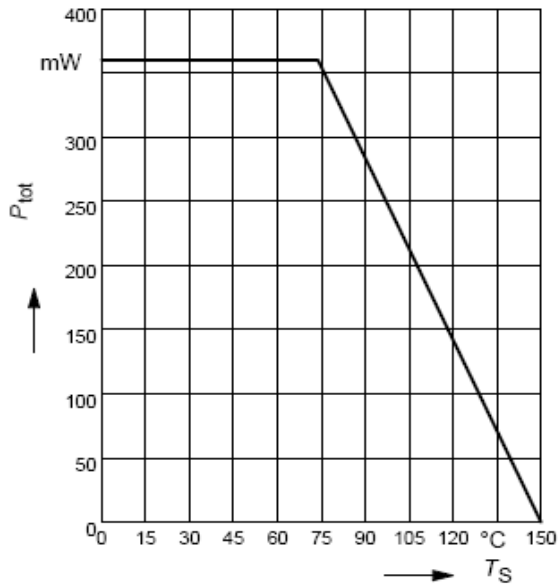
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$ BCV27 BCV47	40 80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$ BCV27 BCV47	30 60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	10			V
Collector cutoff current	I_{CBO}	$V_{CB}=30V, I_E=0$ BCV27 $V_{CB}=60V, I_E=0$ BCV47			0.1 0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=1V, I_C=100\mu A$ BCV27 BCV47	4000 2000			
DC current gain	h_{FE}	$V_{CE}=5V, I_C=10mA$ BCV27 BCV47	10k 4000			
DC current gain	h_{FE}	$V_{CE}=5V, I_C=0.1A$ BCV27 BCV47	20k 10k			
DC current gain	h_{FE}	$V_{CE}=5V, I_C=0.5A$ BCV27 BCV47	4000 2000			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=0.1mA$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=0.1mA$			1.5	V
Transition frequency	f_T	$V_{CE}=5V, I_C=50mA$ $f=100MHz$		170		MHz
Collector-base capacitance	C_{cb}	$V_{CB}=10V, f=1MHz$		3.5		pF

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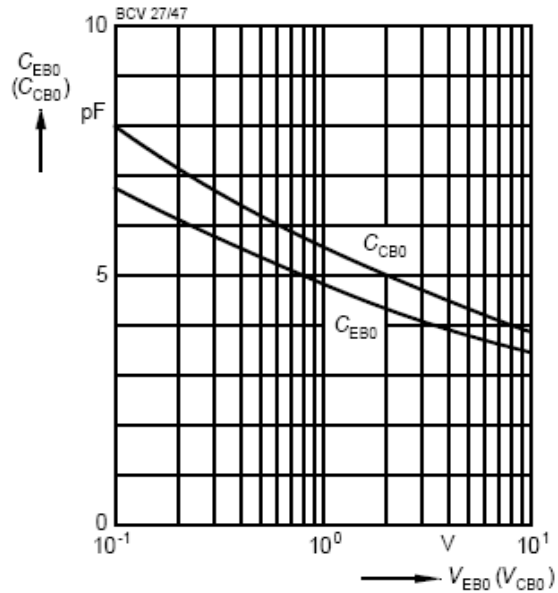
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Total power dissipation $P_{\text{tot}} = f(T_S)$



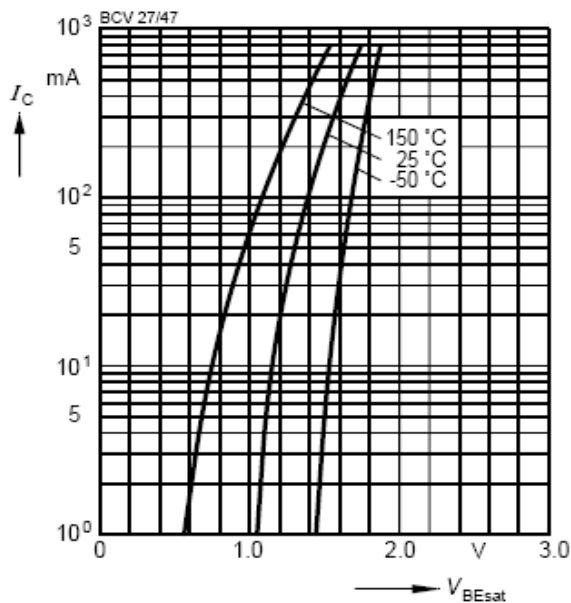
Collector-base capacitance $C_{CB} = f(V_{CB0})$

Emitter-base capacitance $C_{EB} = f(V_{EB0})$



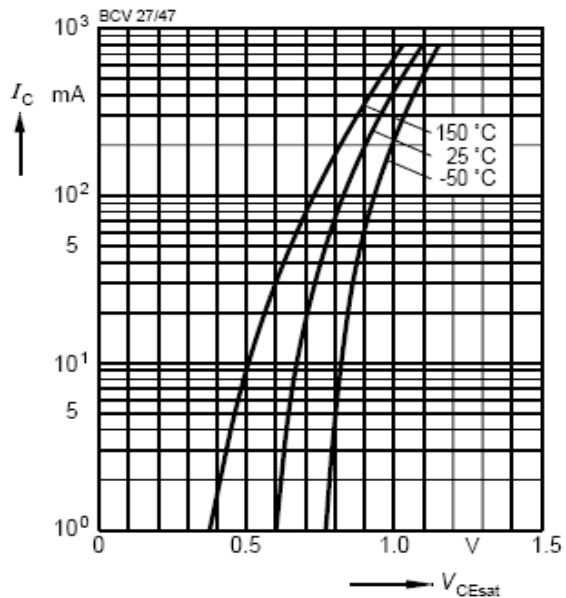
Base-emitter saturation voltage

$$I_C = f(V_{BE\text{sat}}), h_{FE} = 1000$$



Collector-emitter saturation voltage

$$I_C = f(V_{CE\text{sat}}), h_{FE} = 1000$$



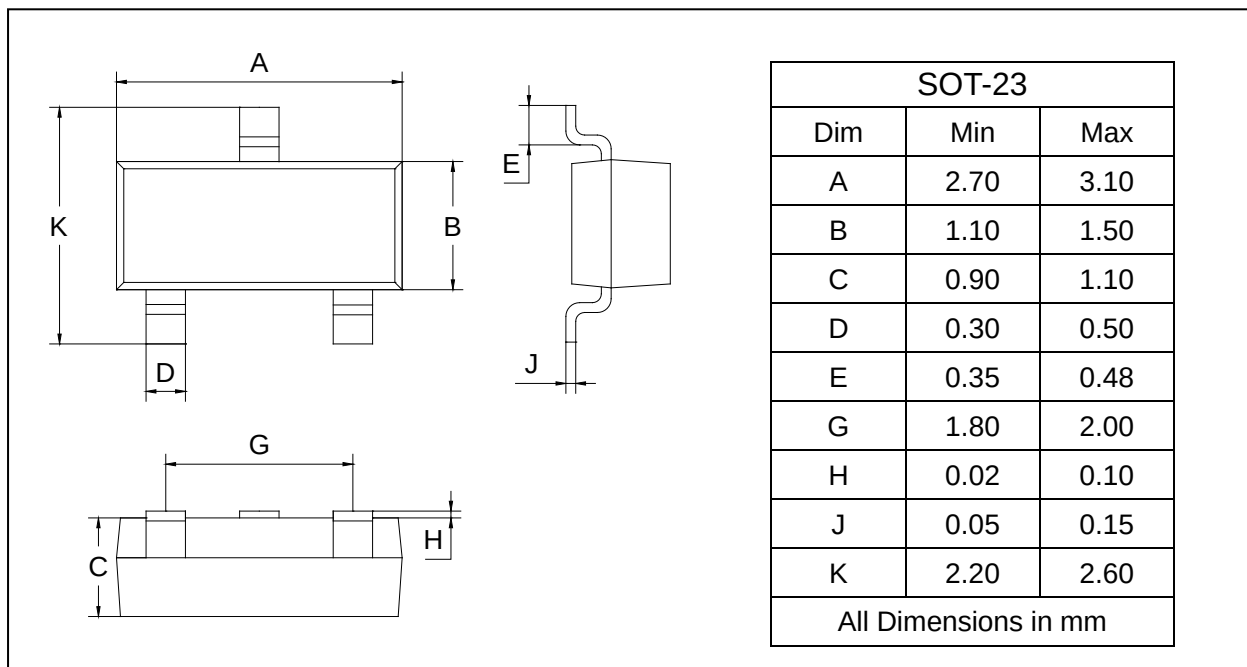
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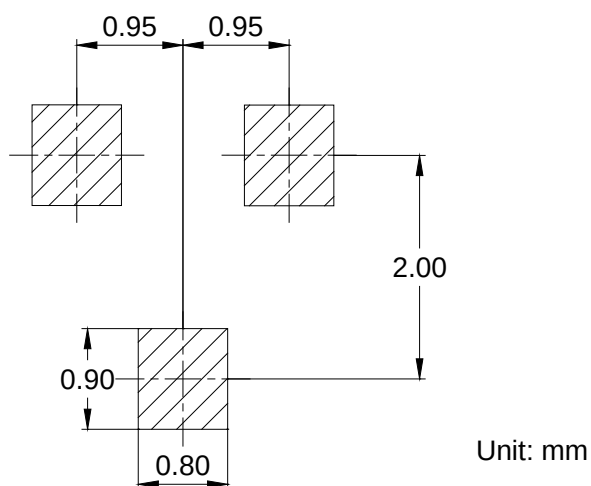
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BCV27/BCV47	SOT-23	3000 pcs / Tape & Reel