



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# SOT23 NPN SILICON PLANAR DARLINGTON TRANSISTORS

## BCV27 BCV47

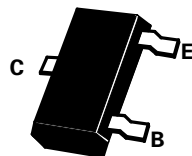
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### FEATURES

- \* High  $V_{CE0}$
- \* Low saturation voltage

COMPLEMENTARY TYPES – BCV27 – BCV28  
BCV47 – BCV48

PARTMARKING DETAILS – BCV27 – ZFF  
BCV47 – ZFG



SOT23

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	BCV27	BCV47	UNIT
Collector-Base Voltage	$V_{CBO}$	40	80	V
Collector-Emitter Voltage	$V_{CEO}$	30	60	V
Emitter-Base Voltage	$V_{EBO}$	10		V
Peak Pulse Current	$I_{CM}$	800		mA
Continuous Collector Current	$I_C$	500		mA
Base Current	$I_B$	100		mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	330		mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150		$^{\circ}C$

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

PARAMETER	SYMBOL	BCV27		BCV47		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	40		80		V	$I_C=100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30		60		V	$I_C=10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	10		10		V	$I_E=10\mu A$
Collector Cut-Off Current	$I_{CBO}$		100		100	nA	$V_{CB}=30V$
			10		10	nA	$V_{CB}=60V$
						$\mu A$	$V_{CB}=30V, T_{amb}=150^{\circ}C$
						$\mu A$	$V_{CB}=60V, T_{amb}=150^{\circ}C$
Emitter Base Cut-Off Current	$I_{EBO}$		100		100	nA	$V_{EB}=4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		1.0		1.0	V	$I_C=100mA, I_B=0.1mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.5		1.5	V	$I_C=100mA, I_B=0.1mA^*$
Static Forward Current Transfer Ratio	$h_{FE}$	4K 10K 20K 4K		2K 4K 10K 2K			$I_C=100\mu A, V_{CE}=1V^{\dagger}$ $I_C=10mA, V_{CE}=5V^*$ $I_C=100mA, V_{CE}=5V^*$ $I_C=500mA, V_{CE}=5V^*$
Transition Frequency	$f_T$	170 Typical		170 Typical		MHz	$I_C=50mA, V_{CE}=5V$ $f = 20MHz$
Output Capacitance	$C_{obo}$	3.5 Typical		3.5 Typical		pF	$V_{CB}=10V, f=1MHz$

\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$

$\dagger$  Periodic Sample Test Only. For typical graphs see FMMT38A datasheet