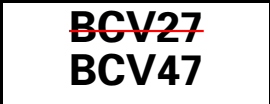


**BCV27 IS OBSOLETE PLEASE USE MMBT6427**  
**BCV47 IS CURRENTLY ACTIVE**

# SOT23 NPN SILICON PLANAR DARLINGTON TRANSISTORS



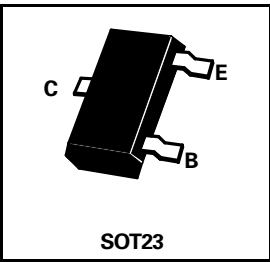
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**FEATURES**

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

COMPLEMENTARY TYPES – BCV27 – BCV28  
 BCV47 – BCV48

PARTMARKING DETAILS – BCV27 – ZFF  
 BCV47 – ZFG



**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	$V_{CB}=30V$ $V_{CB}=60V$
			10		10	$\mu A$	$V_{CB}=30V, T_{amb}=150^\circ C$ $V_{CB}=60V, T_{amb}=150^\circ C$
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