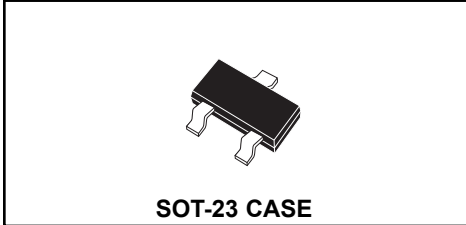


**BCV47**  
**NPN**  
**SILICON DARLINGTON TRANSISTOR**



# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR BCV47 type is a Silicon NPN Darlington Transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high gain.

**Marking Code is FG.**

**MAXIMUM RATINGS** ( $T_A=25^\circ\text{C}$ )

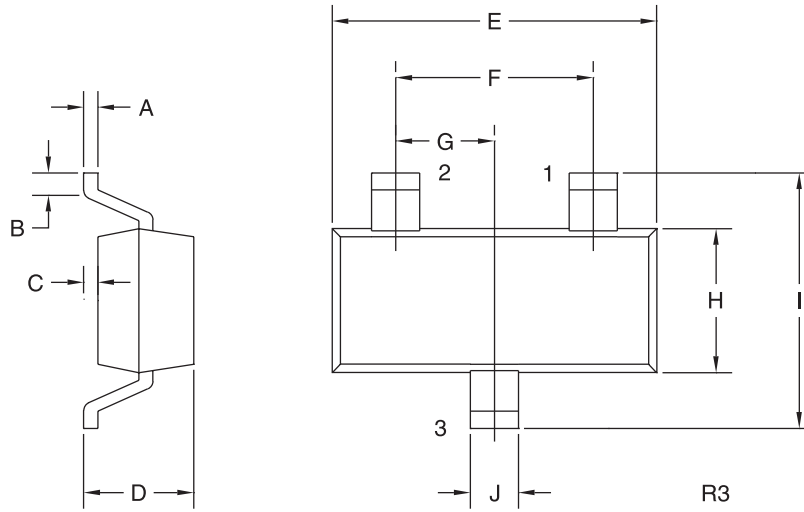
	<b>SYMBOL</b>		<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$	80	V
Collector-Emitter Voltage	$V_{CEO}$	60	V
Emitter-Base Voltage	$V_{EBO}$	10	V
Collector Current	$I_C$	500	mA
Peak Collector Current	$I_{CM}$	800	mA
Base Current	$I_B$	100	mA
Power Dissipation	$P_D$	350	mW
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	357	$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_{CBO}$	$V_{CB}=30\text{V}$			100	nA
$I_{EBO}$	$V_{BE}=10\text{V}$			100	nA
$BV_{CEO}$	$I_C=10\text{mA}$	60			V
$BV_{CBO}$	$I_C=10\mu\text{A}$	80			V
$BV_{EBO}$	$I_E=100\text{nA}$	10			V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B = 0.1\text{mA}$			1.0	V
$V_{BE(SAT)}$	$I_C=100\text{mA}, I_B = 0.1\text{mA}$			1.5	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C = 1.0\text{mA}$	2,000			
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C = 10\text{mA}$	4,000			
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C = 100\text{mA}$	10,000			
$f_T$	$V_{CE}=5.0\text{V}, I_C = 30\text{mA}, f=100\text{MHz}$		220		MHz

R0 ( 07-December 2001)

SOT-23 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

**MARKING CODE: FG**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)