



# FC809

Silicon Barrier Diode

## 30V, 70mA Rectifier

### Applications

- General rectification applications.
- High frequency rectification (switching regulators, converters, choppers).

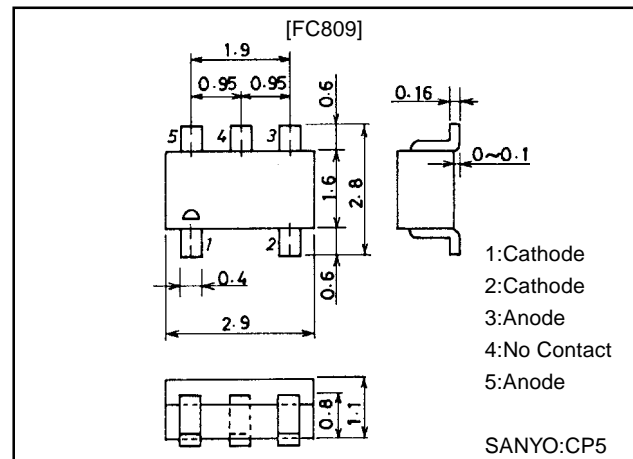
### Features

- Low forward voltage ( $V_F$  max=0.55V) .
- Fast reverse recovery time ( $t_{rr}$  max=10ns) .
- Composite type with 2 diodes contained in the CP package currently in use, saving the mounting space greatly.
- The FC809 is formed with two chips, each being equivalent to the SB007-03CP, placed in one package.

### Package Dimensions

unit:mm

1236A



### Specifications

Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$  (Value per element)

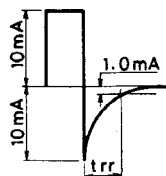
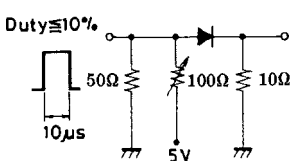
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		30	V
Nonrepetitive Peak Reverse Surge Voltage	$V_{RSM}$		35	V
Average Output Current	$I_O$		70	mA
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	2	A
Junction Temperature	$T_J$		-55 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

Electrical Characteristics at  $T_a = 25^\circ\text{C}$  (Value per element)

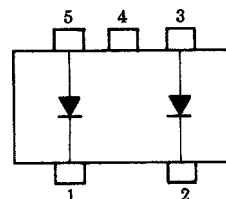
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=20\mu\text{A}$	30			V
Forward Voltage	$V_F$	$I_F=70\text{mA}$			0.55	V
Reverse Current	$I_R$	$V_R=15\text{V}$			5.0	$\mu\text{A}$
Interteminal Capacitance	C	$V_R=10\text{V}$ , $f=1\text{MHz}$		3.0		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}$ , See specified Test Circuit			10	ns
Thermal Resistance	$R_{th}(j-a)$			560		$^\circ\text{C/W}$

· Marking:809

### $t_{rr}$ Test Circuit

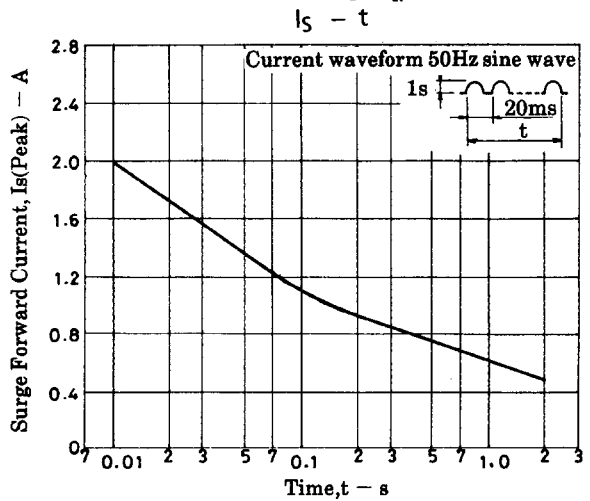
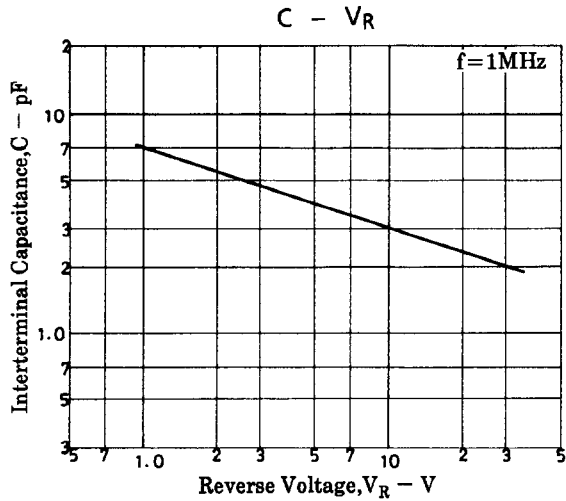
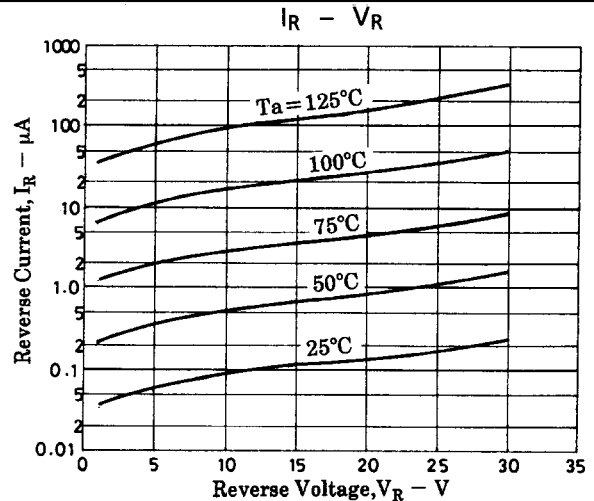
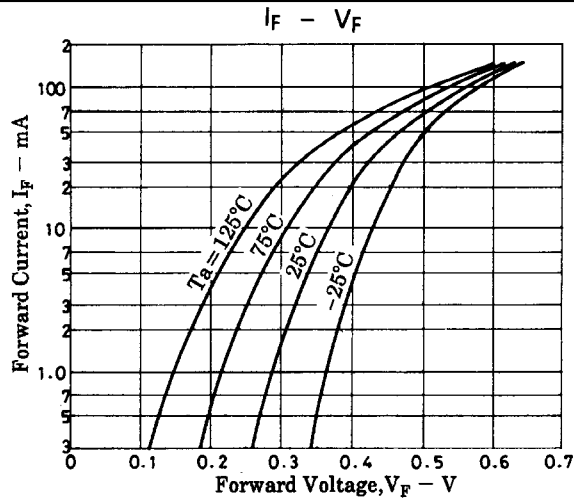


### Electrical Connection



- 1:Cathode
  - 2:Cathode
  - 3:Anode
  - 4:No Contact
  - 5:Anode
- (Top view)

# FC809



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