

# BYV36C

## SINTERED GLASS JUNCTION FAST AVALANCHE RECTIFIER

VOLTAGE: 600V

CURRENT: 1.6A



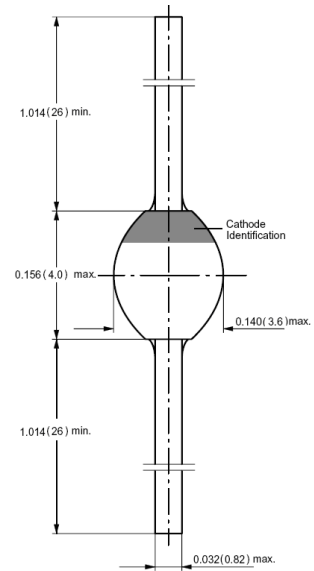
### FEATURE

Glass passivated  
High maximum operating temperature  
Low leakage current  
Excellent stability  
Guaranteed avalanche energy absorption capability

### MECHANICAL DATA

Case: SOD-57 sintered glass case  
Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C  
Polarity: color band denotes cathode end  
Mounting position: any

### SOD-57



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	BYV36C	units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	600	V
Maximum RMS Voltage	$V_{RMS}$	420	V
Maximum DC blocking Voltage	$V_{DC}$	600	V
Reverse Breakdown Voltage at $I_R = 0.1mA$	$V_{(BR)R}$	700min	V
Maximum Average Forward Rectified Current at $T_{tp}=60^\circ C$ , lead length=10mm	$I_{F(AV)}$	1.6	A
Peak Forward Surge Current at $t=10ms$ half sinewave	$I_{FSM}$	30	A
Maximum Forward Voltage at rated Forward Current and 25°C $I_F = 1.0A$	$V_F$	1.35	V
Maximum DC Reverse Current at rated DC blocking voltage $T_j = 25^\circ C$ $T_j = 165^\circ C$	$I_R$	5.0 150	$\mu A$ $\mu A$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	100	nS
Non Repetitive Reverse Avalanche Energy at $L=120Mh$	$E_R$	10	mJ
Typical Diode Capacitance at $f=1MHz, V_R=0V$	$C_d$	45	pF
Typical Thermal Resistance (Note 2)	$R_{th(ja)}$	100	K/W
Storage and Operating Junction Temperature	$T_{stg}, T_j$	-65 to +175	°C

Note:

- Reverse Recovery Condition  $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$
- Device mounted on an epoxy-glass printed-circuit boards, 1.5mm thick; thickness of Cu-layer  $\geq 40 \mu m$

## RATINGS AND CHARACTERISTIC CURVES BYV36C

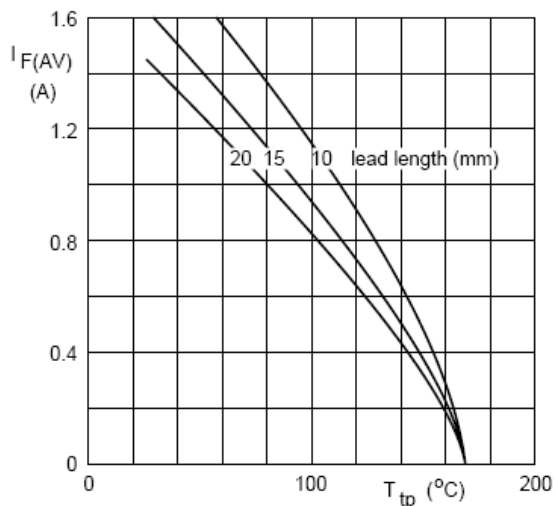
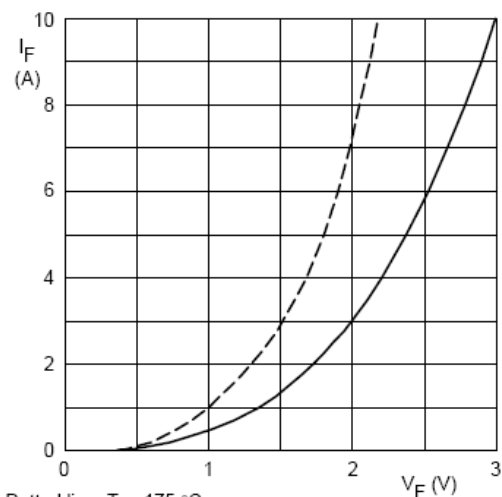


Fig.1 Maximum average forward current as a function of tie-point temperature (including losses due to reverse leakage).



Dotted line:  $T_j = 175^\circ\text{C}$ .  
Solid line:  $T_j = 25^\circ\text{C}$ .

Fig.2 Forward current as a function of forward voltage; maximum values.

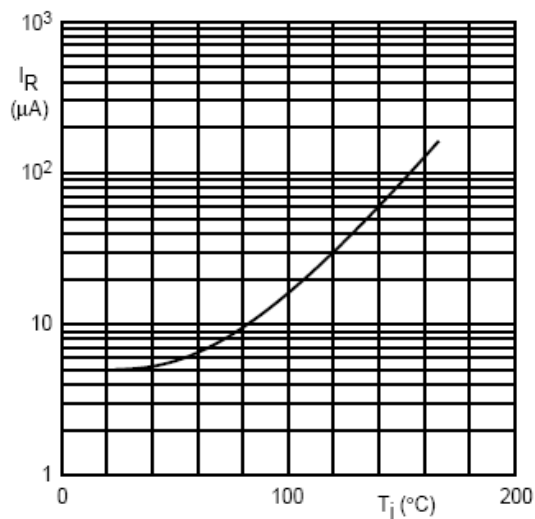


Fig.3 Reverse current as a function of junction temperature; maximum values.

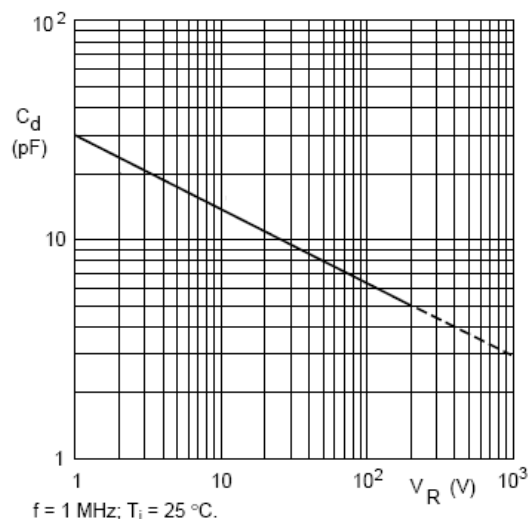


Fig.4 Diode capacitance as a function of reverse voltage, typical values.

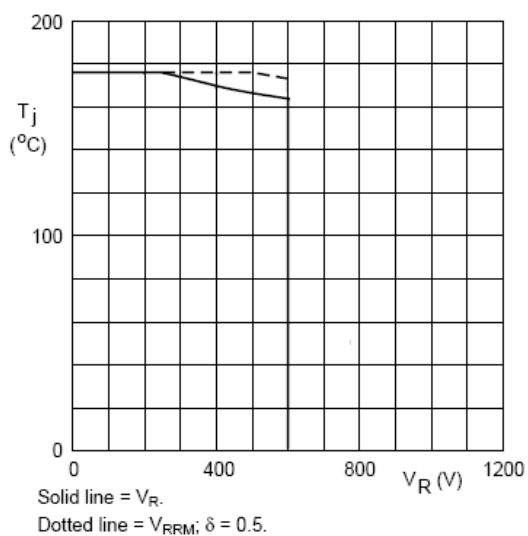


Fig.5 Maximum permissible junction temperature as a function of reverse voltage.