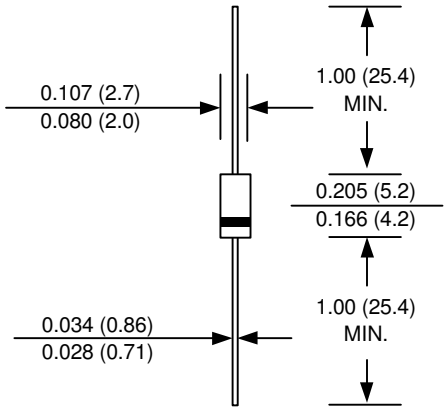
# BYW27-50 - BYW27-1000

## SILICON RECTIFIER DIODES

## PRV : 50 - 1000 Volts
## Io : 1.0 Amperes

### DO - 41




**Dimensions in inches and ( millimeters )**

### FEATURES :

* High current capability
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Pb / RoHS Free

### MECHANICAL DATA :

* Case : DO-41 Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.34 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| RATING | SYMBOL | BYW 27-50 | BYW 27-100 | BYW 27-200 | BYW 27-400 | BYW 27-600 | BYW 27-800 | BYW 27-1000 | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 70°C | $I_F$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 50 | | | | | | | A |
| Maximum Forward Voltage at $I_F$ = 1.0 Amp. | $V_F$ | 1.0 | | | | | | | V |
| Maximum DC Reverse Current Ta = 25 °C | $I_R$ | 0.2 | | | | | | | µA |
| at rated DC Blocking Voltage Ta = 100 °C | $I_{R(H)}$ | 25 | | | | | | | µA |
| Typical Junction Capacitance (Note1) | $C_J$ | 30 | | | | | | | pF |
| Typical Thermal Resistance (Note2) | RθJA | 50 | | | | | | | °C/W |
| Junction Temperature Range | $T_J$ | - 65 to + 175 | | | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | - 65 to + 175 | | | | | | | °C |

**Notes :**

(1) Measured at 1.0 MHz and applied reverse voltage of 4.0$V_{DC}$

(2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

## RATING AND CHARACTERISTIC CURVES ( BYW27-50 - BYW27-1000 )

**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**

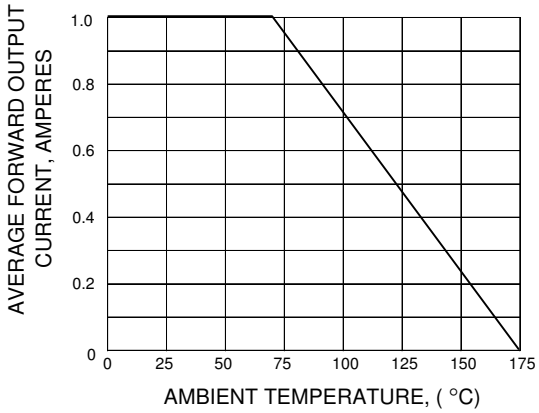



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

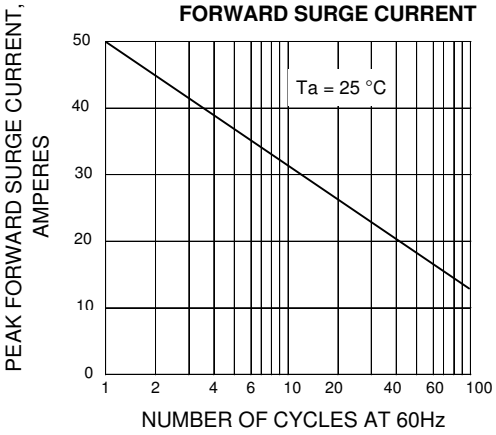



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**

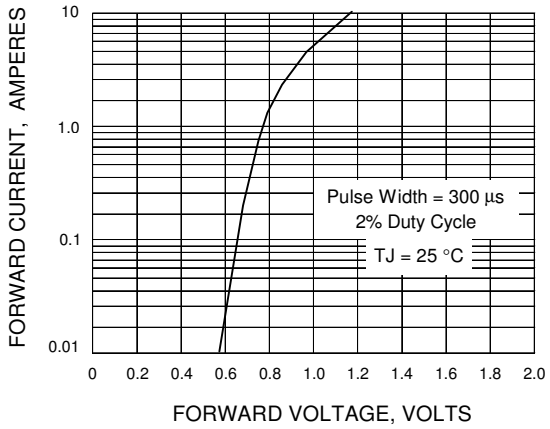



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**