

# BY584

## HIGH VOLTAGE SOFT-RECOVERY RECTIFIER DIODE

**PRV : 1800 Volts**

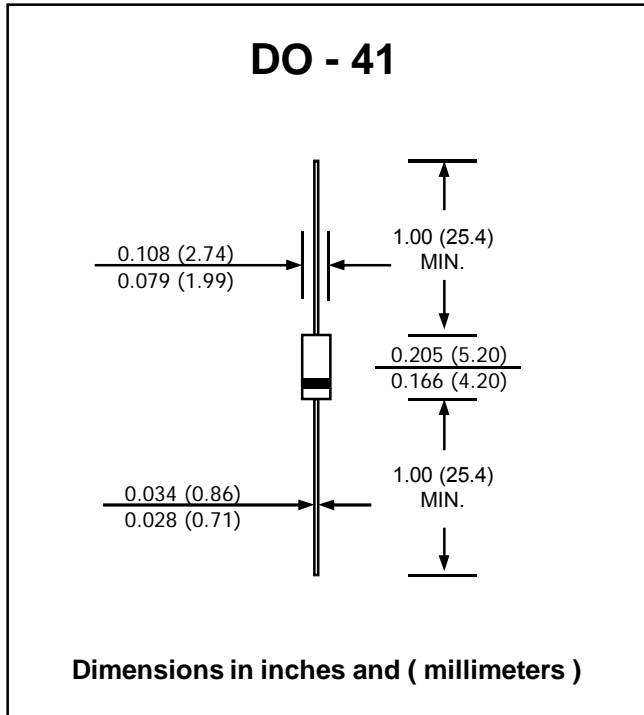
**$I_{F(AV)}$  : 100 mA**

### FEATURES :

- \* Glass passivated junction chip
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* **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 : 0.339 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%.

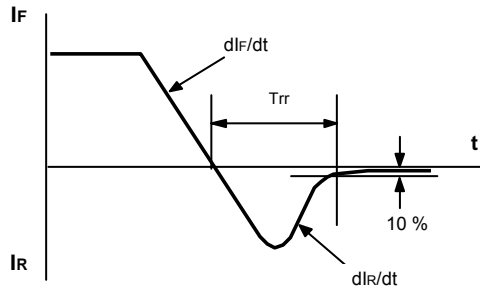
RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	1800	V
Maximum Working Reverse Voltage	$V_{RW}$	1500	V
Maximum Non-Repetitive Peak Reverse Voltage	$V_{RSM}$	1800	V
Maximum Average Forward Current (Note 1)	$I_{F(AV)}$	85	mA
Maximum Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	5.0	A
Maximum Repetitive Peak Forward Current	$I_{FRM}$	800	mA
Maximum Forward Voltage at 100 mA , $T_j=T_j$ max.	$V_F$	8.5	V
Maximum Reverse Current at Reverse Voltage	$I_R$	3.0	$\mu$ A
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	0.2	$\mu$ s
Diode Capacitance ( $V_R = 0$ V; $f = 1$ MHz)	$C_d$	2	pF
Thermal Resistance - Junction to Ambient	$R_{\theta JA}$	155	K / W
Junction Temperature Range	$T_j$	- 65 to + 120	$^{\circ}$ C
Storage Temperature Range	$T_{STG}$	- 65 to + 120	$^{\circ}$ C

#### Notes :

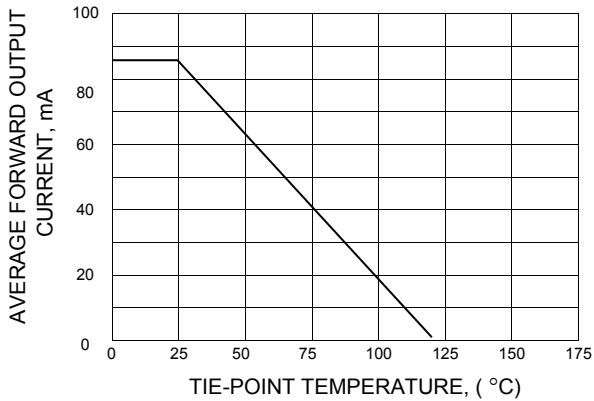
- (1)  $T_{tp} = 25$  °C, Lead Length 10 mm.
- (2) Measured with  $I_F = 100$  mA, to  $V_R \geq 100$ V

**RATING AND CHARACTERISTIC CURVES ( BY584 )**

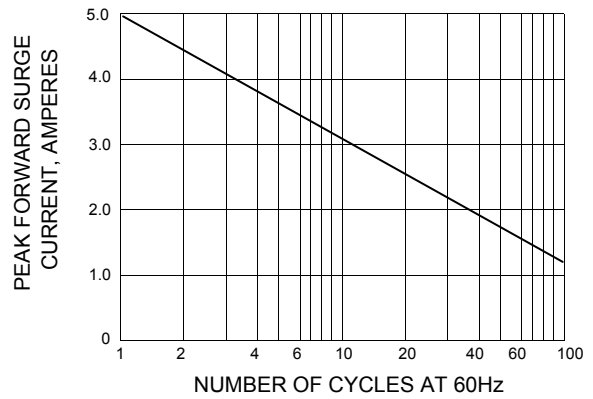
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC**



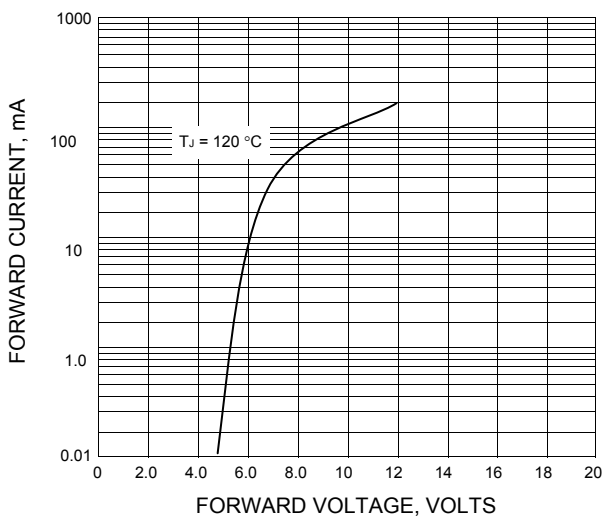
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

