

# 1GU42

**PRV : 400 Volts**

**Io : 1.0 Ampere**

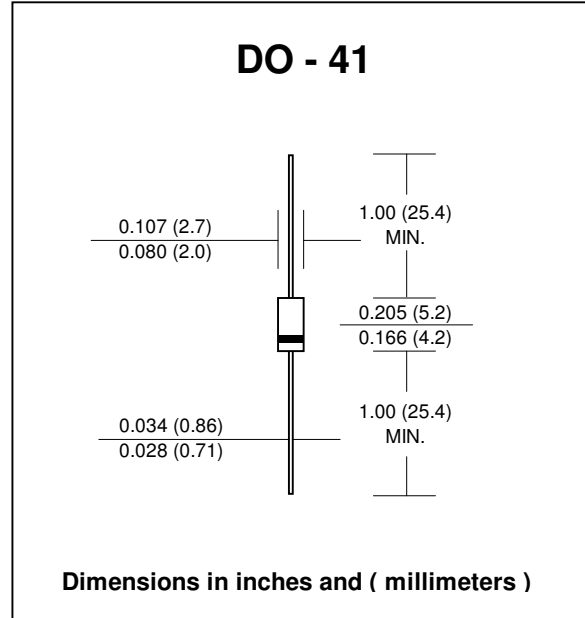
**FEATURES :**

- \* 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

## FAST RECOVERY RECTIFIER



### 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	$V_{RRM}$	400	V
Maximum Average Forward Current	$I_{F(AV)}$	1.0	A
Maximum Peak One Cycle Surge Forward Current ( Non-Repetitive )	$I_{FSM}$	15 ( 50Hz )	A
		17 ( 60Hz )	
Maximum Peak Forward Voltage at $I_F = 1.0$ Amp.	$V_F$	1.5	V
Maximum Repetitive Peak Reverse Current at $V_{RRM}$	$I_R$	50	$\mu A$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	100	ns
Junction Temperature Range	$T_J$	- 40 to + 150	°C
Storage Temperature Range	$T_{STG}$	- 40 to + 150	°C

**Note:**

( 1 ) Reverse Recovery Test Conditions :  $I_F = 1$  A,  $di/dt = -30$  A/ $\mu s$ .

## RATING AND CHARACTERISTIC CURVES ( 1GU42 )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

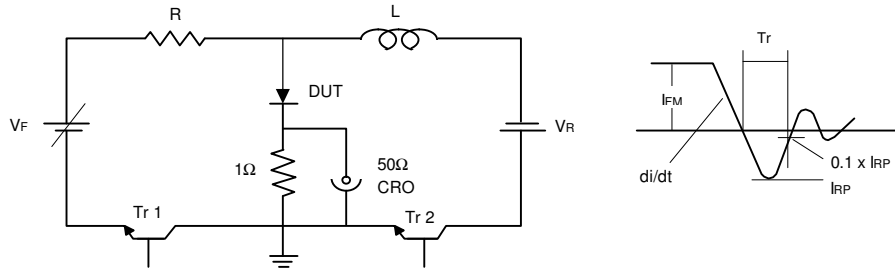


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

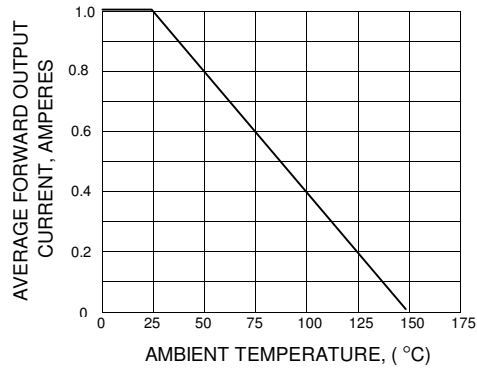


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

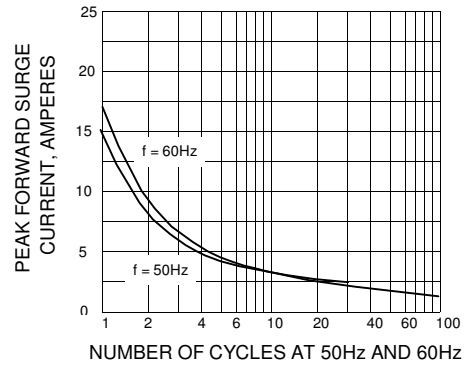


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

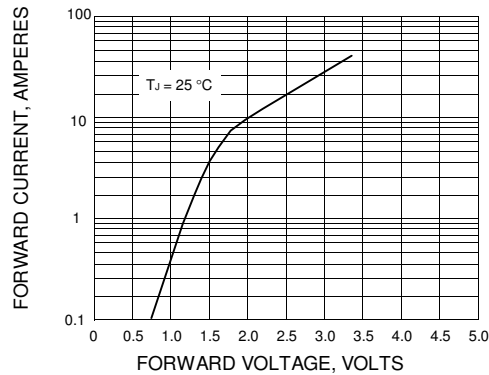


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

