

## 1.0A Glass Passivated Surface Mount Efficient Fast Rectifiers - 50-600V

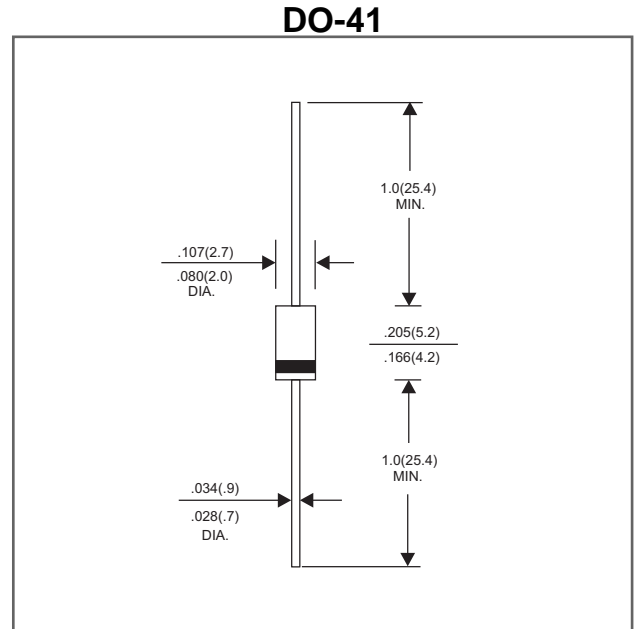
### Features

- Low profile surface mounted application in order to optimize board space.
- $T_{rr}$  less than 25ns for high efficiency
- High current & surge capability.
- Low forward dropdown voltage
- Glass passivated chip junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen free parts, ex. EF101PG-H.

### Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-41
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any
- Weight : Approximated 0.33 gram

### Package outline



Dimensions in inches and (millimeters)

### Maximum ratings (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	Ambient temperature = $55^\circ\text{C}$	$I_o$			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	$I_{FSM}$			30	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^\circ\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM}$ $T_J = 125^\circ\text{C}$				100	
Diode junction capacitance	$f=1\text{MHz}$ and applied 4V DC reverse voltage	$C_J$		15		pF
Storage temperature		$T_{STG}$	-65		+175	$^\circ\text{C}$

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	$T_{RR}^{*5}$ (nS)	Operating temperature $T_J$ , ( $^\circ\text{C}$ )
EF101PG	50	35	50	0.875	25	-55 to +150
EF102PG	100	70	100			
EF103PG	200	140	200			
EF104PG	400	280	400	1.25		
EF105PG	600	420	600	1.75		

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage@ $I_F=1.0\text{A}$
- \*5 Reverse recovery time, note 1

Note 1. Reverse recovery time test condition,  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

## Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

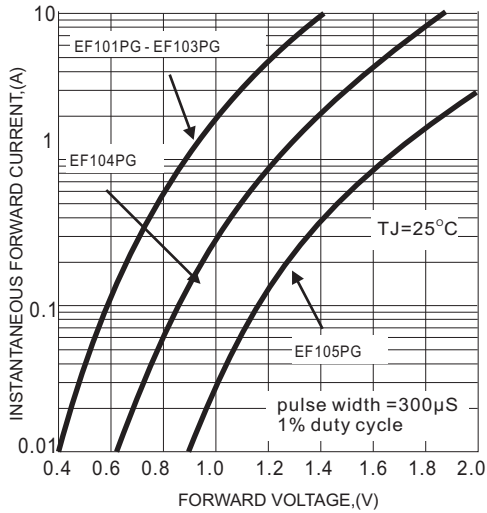


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

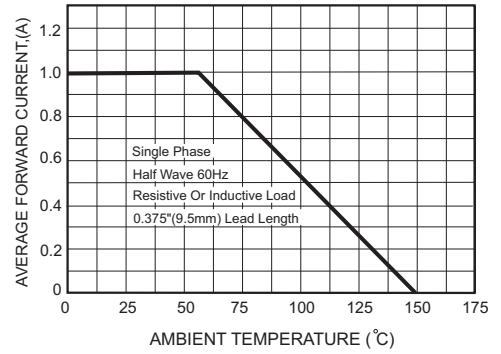


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

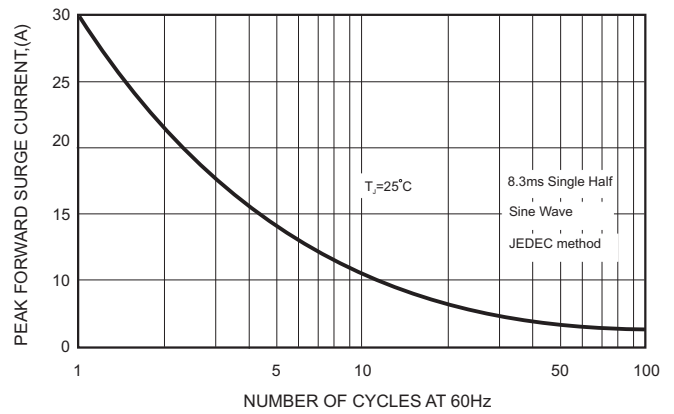
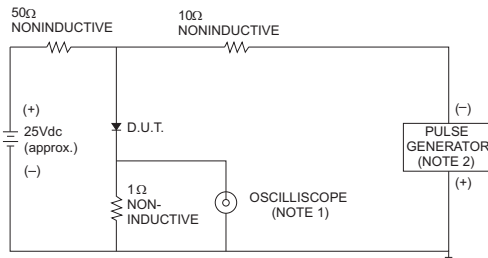


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



- NOTES: 1. Rise Time = 7ns max., Input Impedance = 1 megohm, 22pF.  
2. Rise Time = 10ns max., Source Impedance = 50 ohms.

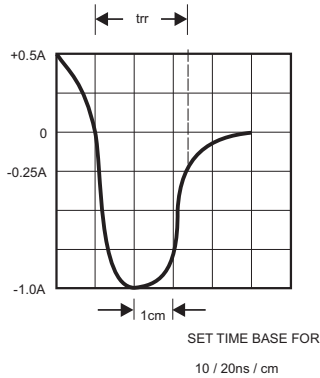


FIG.5-TYPICAL JUNCTION CAPACITANCE

