

# BYM12-50 thru BYM12-400 EGL41A thru EGL41G

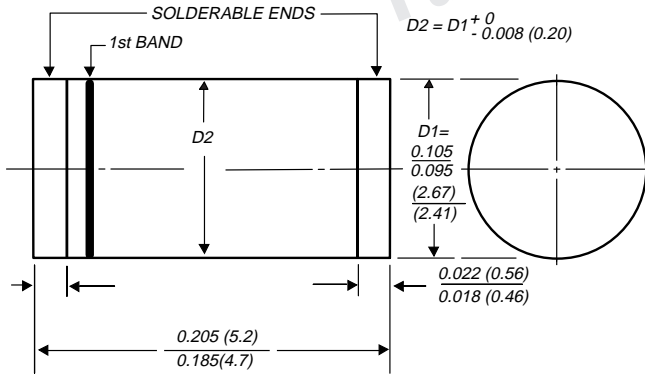


## Surface Mount Glass Passivated Ultrafast Rectifier

Reverse Voltage 50 to 400V

Forward Current 1.0A

### DO-213AB



1st band denotes type and positive end (cathode)

Dimensions in inches  
and (millimeters)



\* Glass-plastic encapsulation  
is covered by Patent No. 3,996,602  
and brazed-lead assembly to  
Patent No. 3,930,306

### Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Capable of meeting environmental standards of MIL-S-19500
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Fast switching for high efficiency
- High temperature soldering guaranteed: 450°C/5 seconds at terminals. Complete device submersible temperature of 260°C for 10 seconds in solder bath

### Mechanical Data

**Case:** JEDEC DO-213AB, molded plastic over glass body

**Terminals:** Plated terminals, solderable per MIL-STD-750, Method 2026

**Polarity:** Two bands indicate cathode end – 1st band denotes device type and 2nd band denotes repetitive peak reverse voltage rating

**Mounting Position:** Any **Weight:** 0.13 g., 0.0046 oz.

### Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	BYM12-50	BYM12-100	BYM12-150	BYM12-200	BYM12-300	BYM12-400	Unit
Fast efficient device: 1st band is Green		EGL41A	EGL41B	EGL41C	EGL41D	EGL41F	EGL41G	
Polarity color bands (2nd Band)		Gray	Red	Pink	Orange	Brown	Yellow	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	300	400	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	210	280	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	300	400	V
Maximum average forward rectified current at T <sub>T</sub> = 75°C	I <sub>F(AV)</sub>	1.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30						A
Maximum thermal resistance (Note 1, 2)	R <sub>θJA</sub> R <sub>θJT</sub>	60 30						°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175						°C

### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

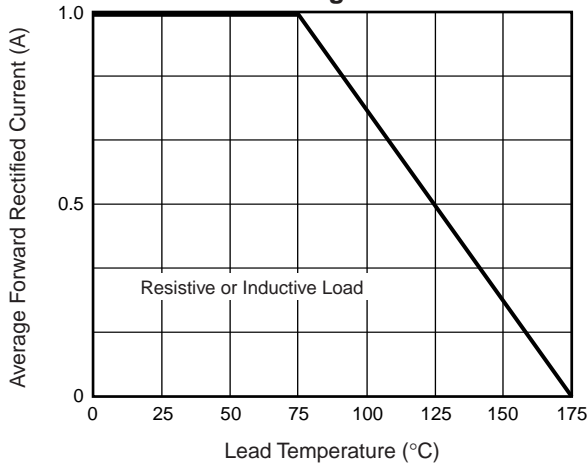
Parameter	Symbol	BYM12-50	BYM12-100	BYM12-150	BYM12-200	BYM12-300	BYM12-400	Unit
		EGL41A	EGL41B	EGL41C	EGL41D	EGL41F	EGL41G	
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.0				1.25		V
Maximum DC reverse current T <sub>A</sub> = 25°C at rated DC blocking voltage T <sub>A</sub> = 125°C	I <sub>R</sub>	5.0 50						μA
Max. reverse recovery time at I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>r</sub> = 0.25A	t <sub>rr</sub>	50						ns
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	20				14		pF

**Notes:** (1) Thermal resistance from junction to ambient, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal  
(2) Thermal resistance from junction to terminal, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

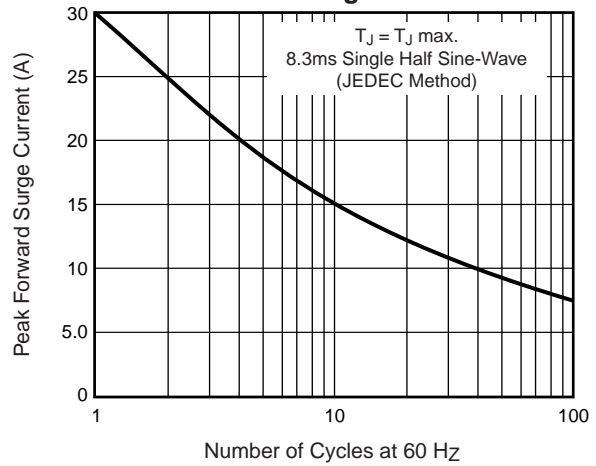
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## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

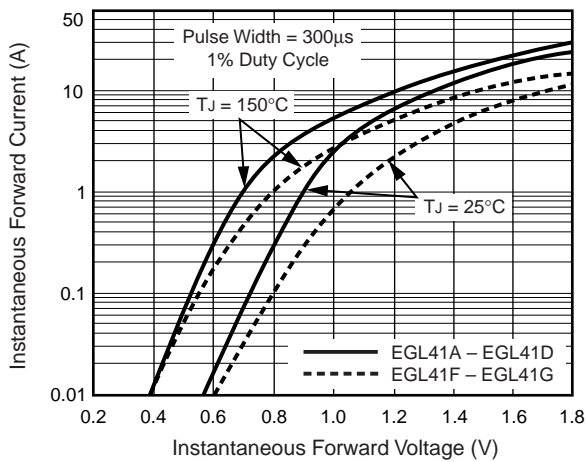
**Fig. 1 – Maximum Forward Current Derating Curve**



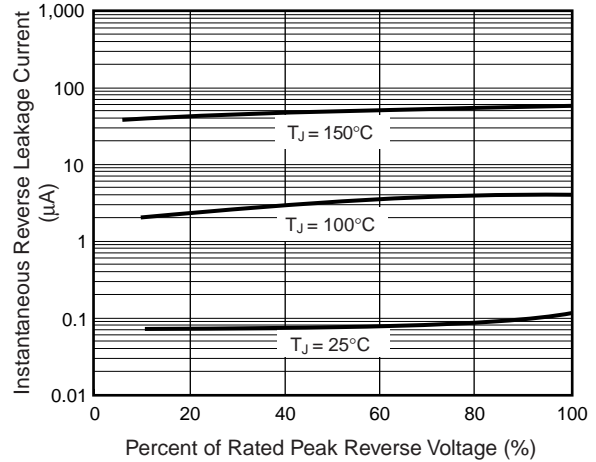
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



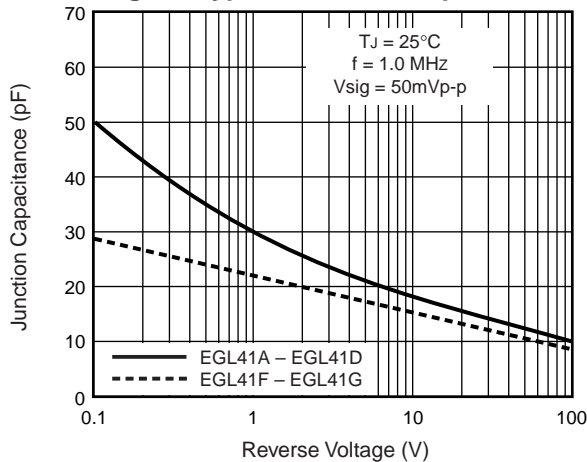
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Leakage Characteristics**



**Fig. 5 – Typical Junction Capacitance**



**Fig. 6 – Typical Transient Thermal Impedance**

