

# Silicon Diode

## **BYM12-400**

Fast Efficient Rectifier

400V / 1A

# DATASHEET

from

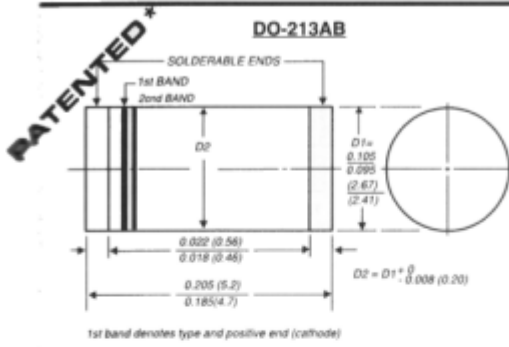
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OEM – General Semiconductor

Source: General Semiconductor Databook 1998

# BYM12-50 THRU BYM12-400 EGL41A THRU EGL41G

**SURFACE MOUNT GLASS PASSIVATED JUNCTION FAST EFFICIENT RECTIFIER**  
**Reverse Voltage - 50 to 400 Volts    Forward Current - 1.0 Ampere**



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 Laboratory Flammability Classification 94V-0
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ For surface mount applications
- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free 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:** 0.116 ounce, 0.0046 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYM12 -50	BYM12 -100	BYM12 -150	BYM12 -200	BYM12 -300	BYM12 -400	UNITS
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	VRRM	50	100	150	200	300	400	Volts
Maximum RMS voltage	VRMS	35	70	105	140	210	280	Volts
Maximum DC blocking voltage	VDC	50	100	150	200	300	400	Volts
Maximum average forward rectified current at T <sub>T</sub> =75°C	I(AV)	1.0						Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30.0						Amps
Maximum instantaneous forward voltage at 1.0A	VF				1.0	1.25		Volts
Maximum DC reverse current at rated DC blocking voltage	IR				5.0			μA
					50.0			
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	50.0						ns
Typical junction capacitance (NOTE 2)	C <sub>J</sub>				20.0	14.0		pF
Maximum thermal resistance (NOTE 3)	R <sub>θJA</sub>	60.0						°C/W
(NOTE 4)	R <sub>θJT</sub>	30.0						
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175						°C

**NOTES:**  
 (1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A  
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
 (3) Thermal resistance from junction to ambient, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal  
 (4) Thermal resistance from junction to terminal, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

**RATINGS AND CHARACTERISTIC CURVES BYM12-50 THRU BYM12-400, EGL41A THRU EGL41G**

