

# Schottky Diode

## **SGL41-40**

40V / 1A

# DATASHEET

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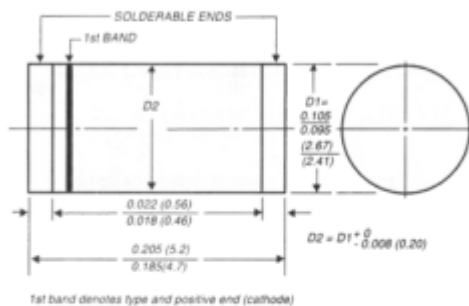
OEM – General Semiconductor

Source: General Semiconductor Databook 1998

# BYM13-20 THRU BYM13-60 SGL41-20 THRU SGL41-60

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**  
Reverse Voltage - 20 to 60 Volts    Forward Current - 1.0 Ampere

**DO-213AB**



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has carries Underwriters Laboratory Flammability Classifications 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ High surge capability
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ For use in low voltage, high frequency inverters, free wheeling and polarity protection applications
- ◆ Guardring for overvoltage protection
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC DO-213AB molded plastic body  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Two bands indicate cathode end 1st band denotes device type 2nd band denotes voltage type  
**Mounting Position:** Any  
**Weight:** 0.116 gram, 0.0041 ounce

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.							
SYMBOLS	BYM13					UNITS	
	-20	-30	-40	-50	-60		
Denotes Schottky devices: 1st band is orange	SGL41-20	SGL41-30	SGL41-40	SGL41-50	SGL41-60		
Polarity color bands (2nd band) voltage type	Gray	Red	Orange	Yellow	Green		
Maximum repetitive peak reverse voltage	VRRM	20	30	40	50	60	Volts
Maximum RMS voltage	VRMS	14	21	28	35	42	Volts
Maximum DC blocking voltage	VDC	20	30	40	50	60	Volts
Maximum average forward rectified current (SEE FIG. 1)	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 (NOTE 1)	VF	0.50		0.70			Volts
Maximum reverse current TA=25°C at rated DC blocking voltage (NOTE 1) TA=100°C	IR	0.5			5.0		mA
Typical junction capacitance (NOTE 2)	CJ	110			80.0		pF
Maximum thermal resistance (NOTE 4) (NOTE 3)	REJA REJT	75.0 30.0					°C/W
Operating junction temperature range	TJ	-55 to +125			-55 to +150		°C
Storage temperature range	TSTG	-55 to +150					°C

**NOTES:**  
 (1) Pulse test: 300µs pulse width, 1% duty cycle  
 (2) Measured at 1 MHz and applied reverse voltage of 4.0 Volts  
 (3) Thermal resistance junction to terminal, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal  
 (4) Thermal resistance junction to ambient, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

**RATINGS AND CHARACTERISTIC CURVES BYM13-20 THRU BYM13-60, SGL41-20 THRU SGL41-60**

