



BYM13-20 thru BYM13-60, SGL41-20 thru SGL41-60

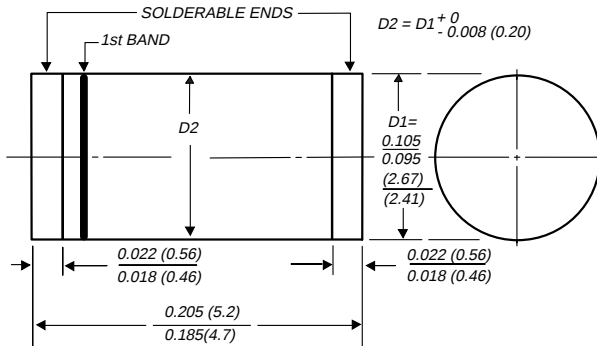
Vishay Semiconductors
formerly General Semiconductor



Surface Mount Schottky Rectifier

Reverse Voltage 20 to 60V
Forward Current 1.0A

DO-213AB



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss, high efficiency
- 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: Plated axial leads, 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: 0.0041 ounce, 0.116 gram

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	BYM13-20	BYM13-30	BYM13-40	BYM13-50	BYM13-60	Unit
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	V _{RRM}	20	30	40	50	60	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	V
Maximum average forward rectified current (SEE FIG. 1)	I _{F(AV)}	1.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30					A
Maximum thermal resistance	R _{θJA} R _{θJT}	75 ⁽²⁾ 30 ⁽³⁾					°C/W
Operating junction temperature range	T _J	-55 to +125			-55 to +150		°C
Storage temperature range	T _{STG}	-55 to +150					°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

		SGL41-20	SGL41-30	SGL41-40	SGL41-50	SGL41-60	
Parameter	Symbol	BYM13-20	BYM13-30	BYM13-40	BYM13-50	BYM13-60	Unit
Maximum instantaneous forward voltage at 1.0A ⁽¹⁾	V _F	0.50			0.70		V
Maximum reverse current at rated DC blocking voltage ⁽¹⁾ T _A =25°C T _A =100°C	I _R	0.5					mA
		10			5.0		
Typical junction capacitance at 4.0V, 1.0MHz	C _J	110			80		pF

NOTES: (1) Pulse test: 300μs pulse width, 1% duty cycle

(2) Thermal resistance junction to terminal, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

(3) Thermal resistance junction to ambient, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

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Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

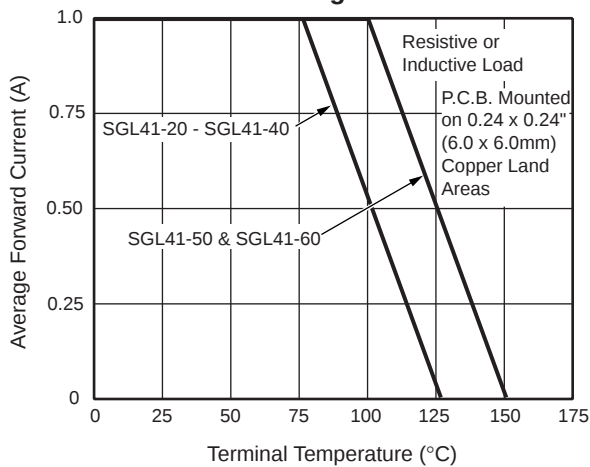


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

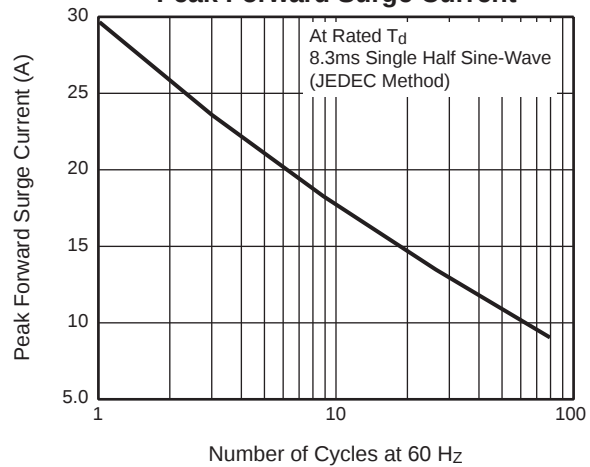


Fig. 3 – Typical Instantaneous Forward Characteristics

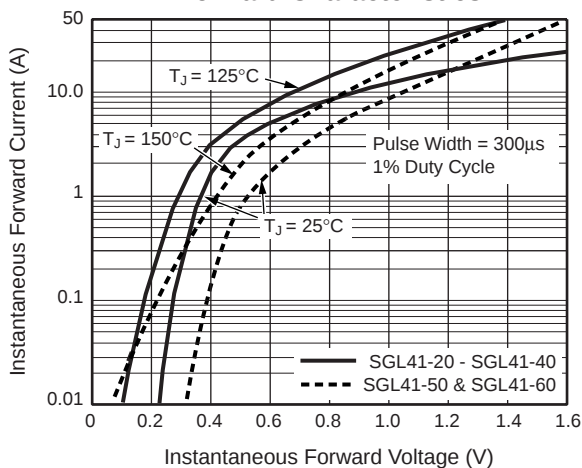


Fig. 4 – Typical Reverse Characteristics

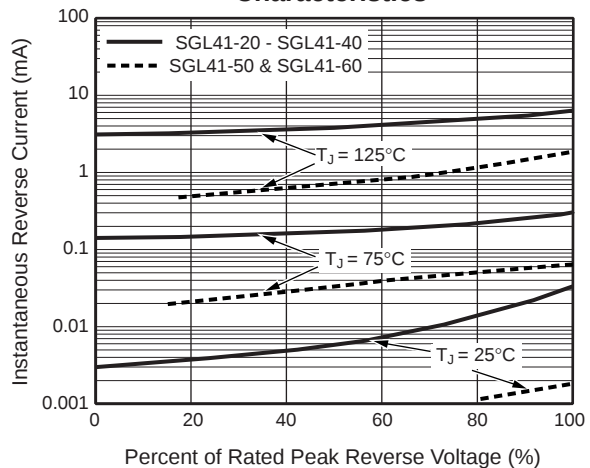


Fig. 5 – Typical Junction Capacitance

