THE DATASHEET OF

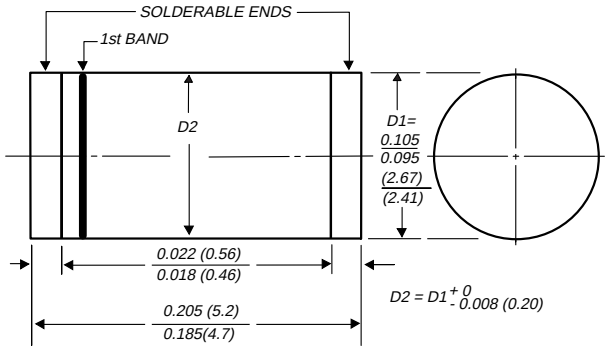
SGL41-20/1

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



1st band denotes type and positive end (cathode)

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 -20	BYM13 -30	BYM13 -40	BYM13 -50	BYM13 -60	UNITS
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	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	Volts
Maximum DC blocking voltage	V_{DC}	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)	I_{FSM}	30.0					Amps
Maximum instantaneous forward voltage at 1.0A (NOTE 1)	V_F	0.50			0.70		Volts
Maximum reverse current at rated DC blocking voltage (NOTE 1) T_A=25°C	I_R	0.5					mA
Maximum reverse current at rated DC blocking voltage (NOTE 1) T_A=100°C	I_R	10			5.0		mA
Typical junction capacitance (NOTE 2)	C_J	110			80.0		pF
Maximum thermal resistance (NOTE 4)	$R_{\Theta JA}$	75.0					°C/W
Maximum thermal resistance (NOTE 3)	$R_{\Theta JT}$	30.0					°C/W
Operating junction temperature range	T_J	-55 to +125			-55 to +150		°C
Storage temperature range	T_{STG}	-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

GENERAL SEMICONDUCTOR

FIG. 1 - FORWARD CURRENT DERATING CURVE

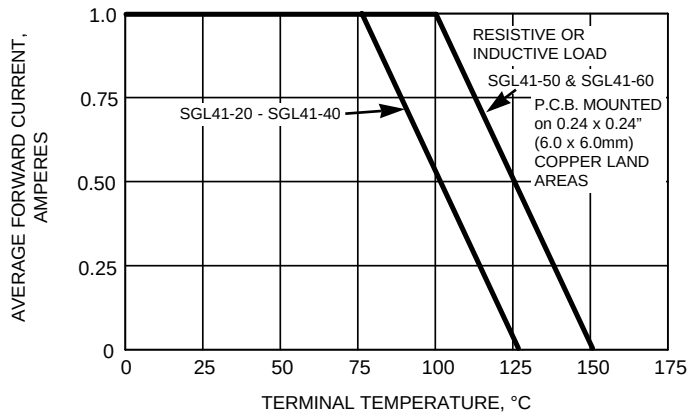


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

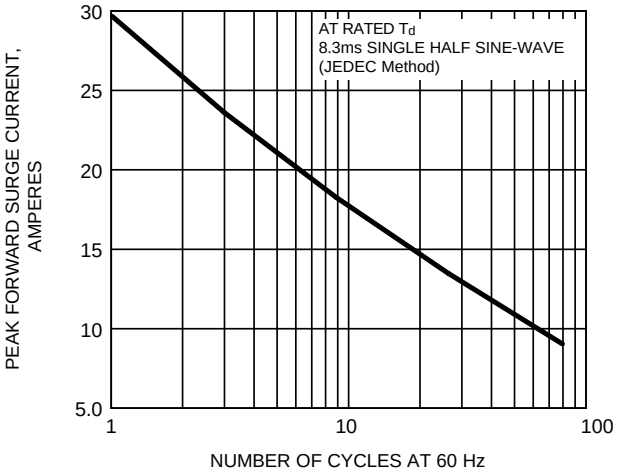


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

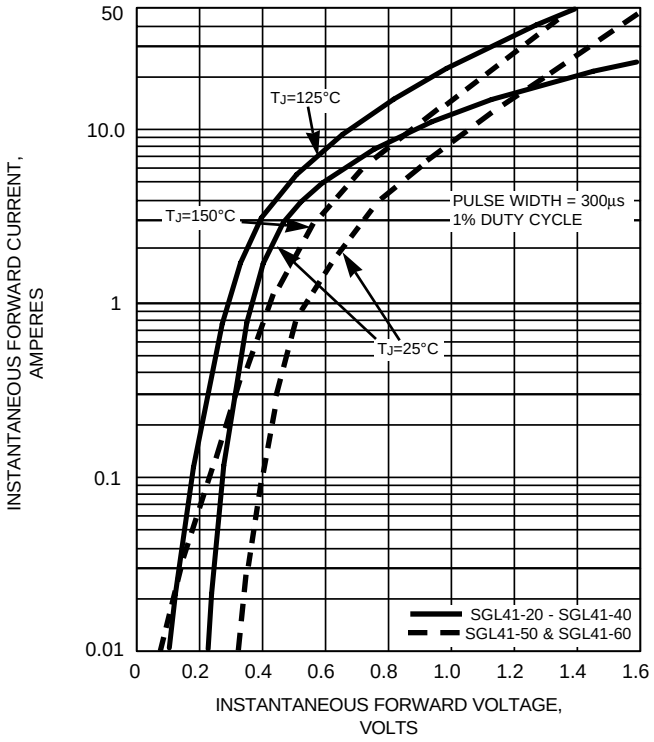


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

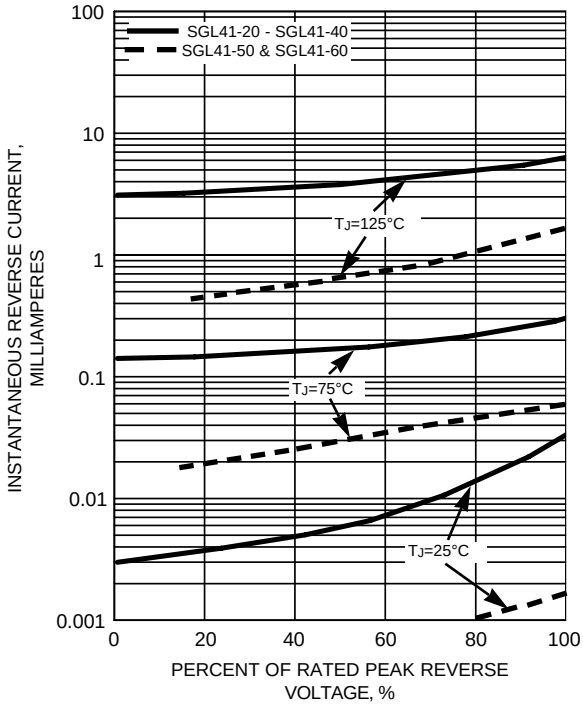
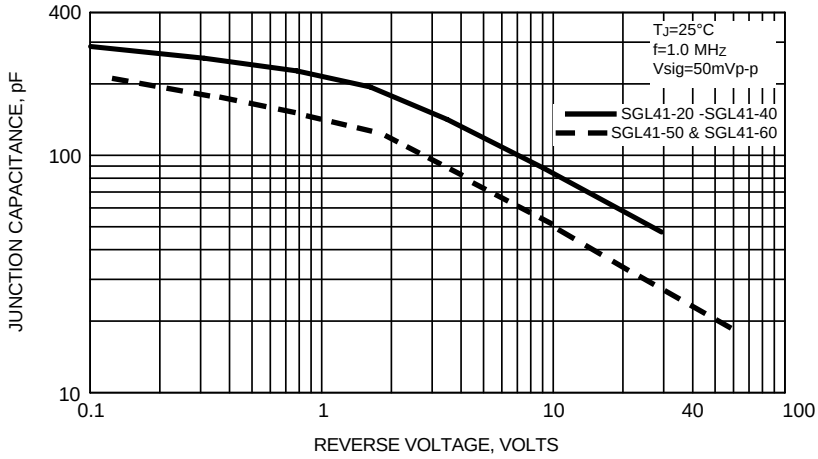


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



GENERAL SEMICONDUCTOR

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