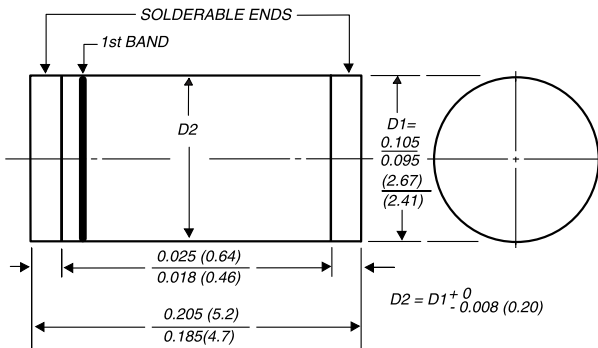


BYM13-20 THRU BYM13-60 SGL41-20 THRU SGL41-60

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					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	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)	I _R	0.5					mA
$T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$		10		5.0			
Typical junction capacitance (NOTE 2)	C _J	110			80.0		pF
Maximum thermal resistance (NOTE 4) (NOTE 3)	R _{θJA} R _{θJT}	75.0 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 pads to each terminal

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

FIG. 1 - FORWARD CURRENT DERATING CURVE

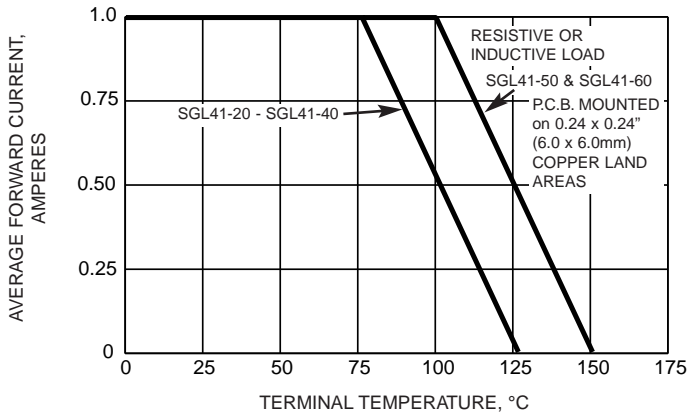


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

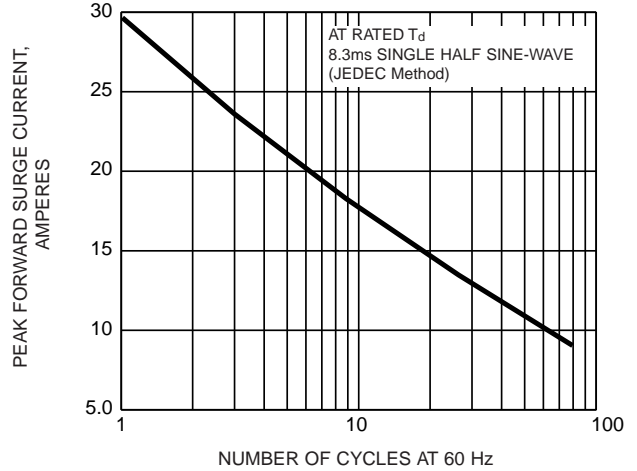


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

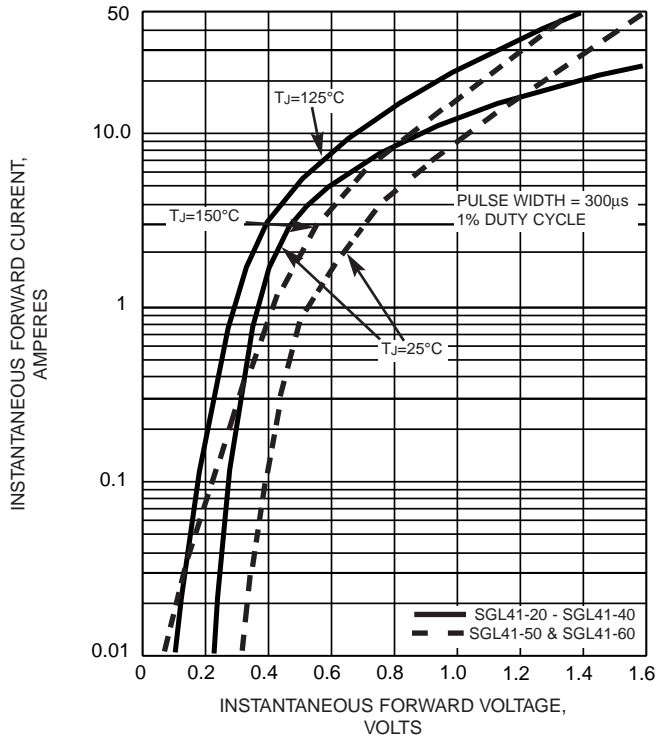


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

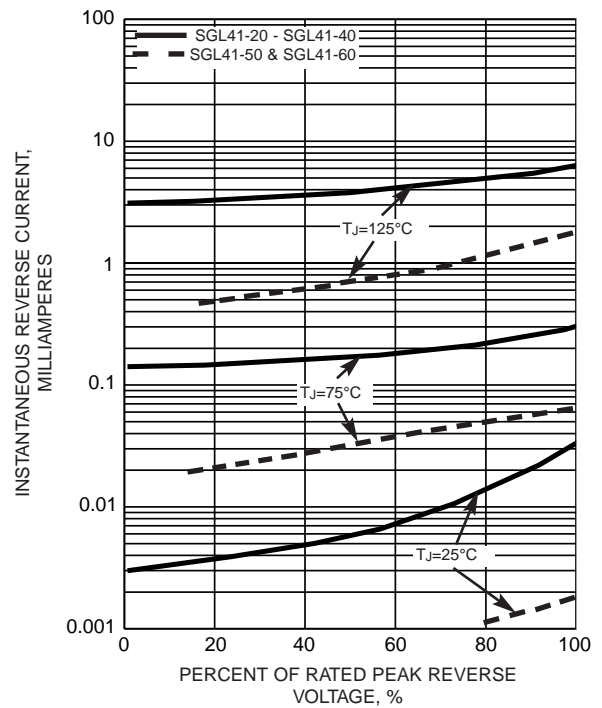


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

