

1N5817 THRU 1N5819

GW

1.0 AMP SCHOTTKY BARRIER RECTIFIERS



FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Epitaxial construction

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

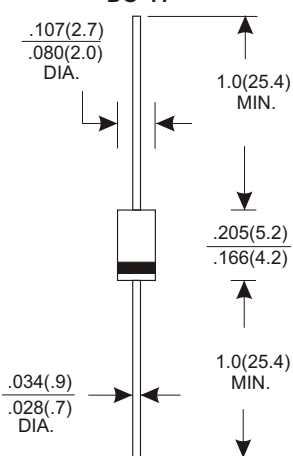
VOLTAGE RANGE

20 to 40 Volts

CURRENT

1.0 Ampere

DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	1N5817	1N5818	1N5819	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	V
Maximum RMS Voltage	14	21	28	V
Maximum DC Blocking Voltage	20	30	40	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=90°C	1.0			A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	25			A
Maximum Instantaneous Forward Voltage at 1.0A	0.45	0.55	0.60	V
Maximum DC Reverse Current Ta=25°C	1.0			mA
at Rated DC Blocking Voltage Ta=100°C	10			mA
Typical Junction Capacitance (Note1)	110			pF
Typical Thermal Resistance RθJA (Note 2)	80			°C/W
Operating Temperature Range Tj	-65 — +125			°C
Storage Temperature Range Tstg	-65 — +150			°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

RATING AND CHARACTERISTIC CURVES (1N5817 THRU 1N5819)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

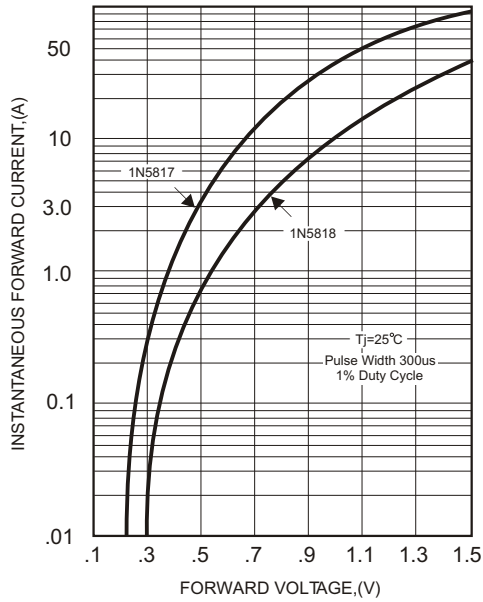


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

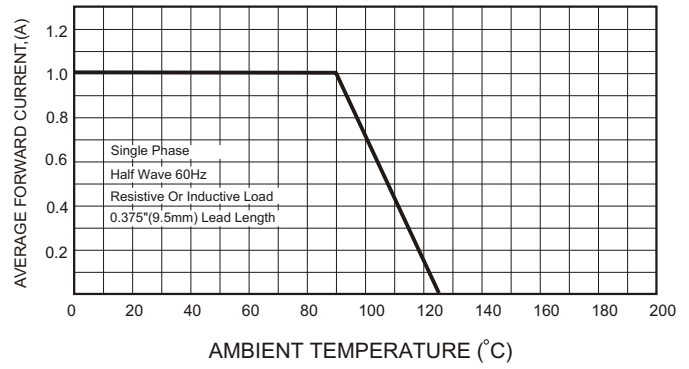


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

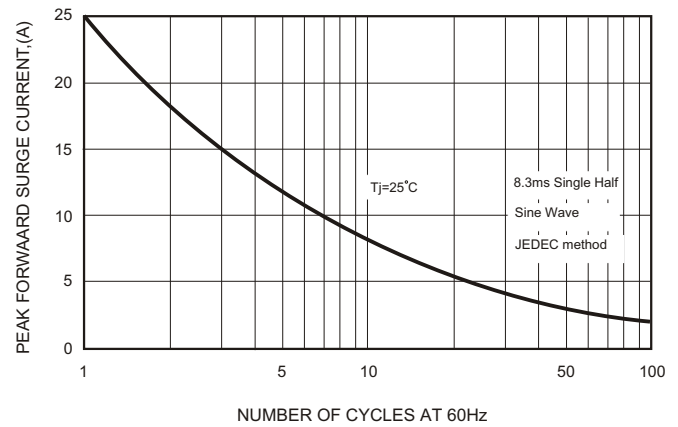


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

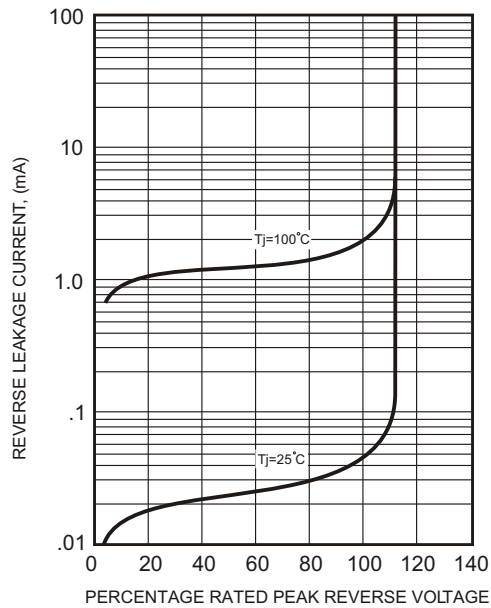
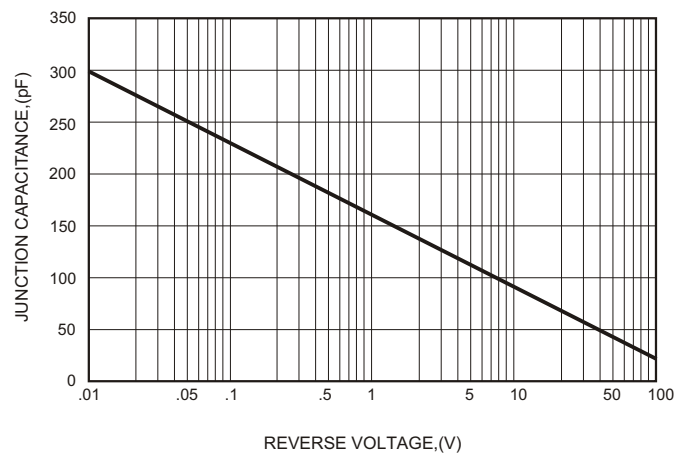


FIG.5-TYPICAL JUNCTION CAPACITANCE



SR120 THRU SR1100

GW

1.0 AMP SCHOTTKY BARRIER RECTIFIERS



FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Epitaxial construction

MECHANICAL DATA

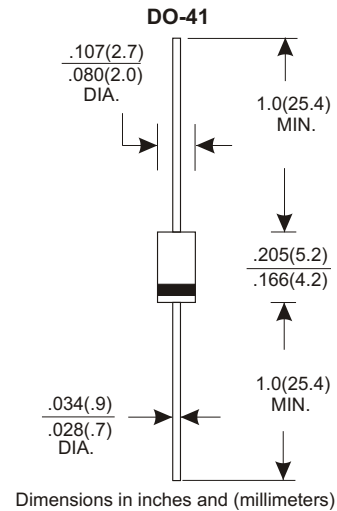
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

VOLTAGE RANGE

20 to 100 Volts

CURRENT

1.0 Ampere



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	SR120	SR130	SR140	SR150	SR160	SR180	SR1100	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	80	100	V
Maximum RMS Voltage	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T _L =100°C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30							A
Maximum Instantaneous Forward Voltage at 1.0A	0.55		0.70		0.85			V
Maximum DC Reverse Current Ta=25°C				0.5				mA
at Rated DC Blocking Voltage Ta=100°C				10				mA
Typical Junction Capacitance (Note1)				110				pF
Typical Thermal Resistance RθJL (Note 2)				15				°C/W
Operating Temperature Range T _J				-65 — +150				°C
Storage Temperature Range T _{stg}				-65 — +150				°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead Vertical PC Board Mounting 0.375"(9.5mm) Lead Length.

RATING AND CHARACTERISTIC CURVES (SR120 THRU SR1100)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

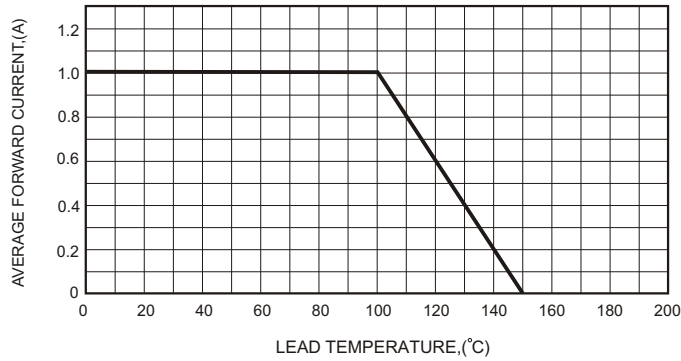


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

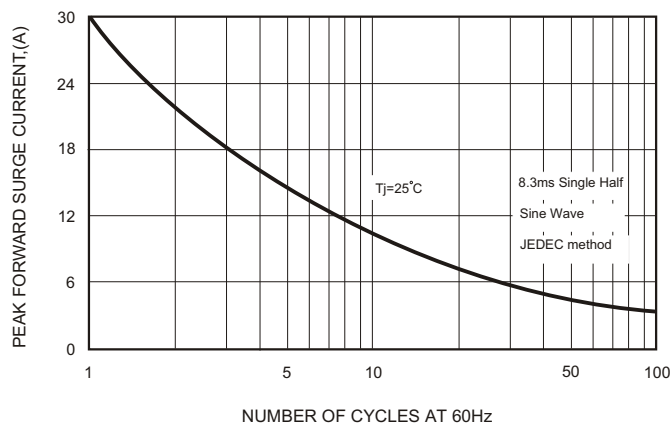


FIG.4-TYPICAL JUNCTION CAPACITANCE

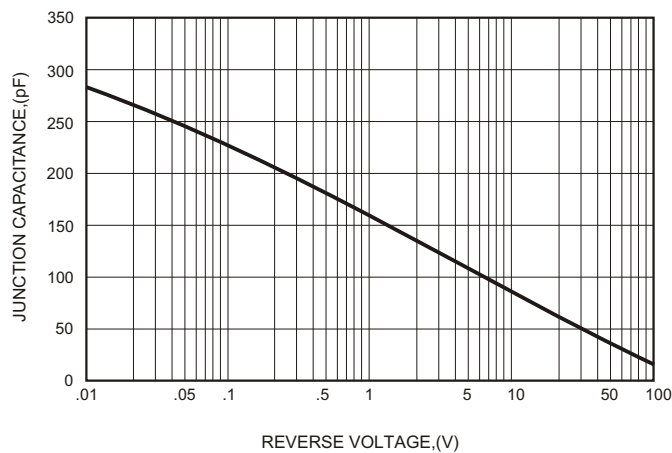


FIG.2-TYPICAL FORWARD CHARACTERISTICS

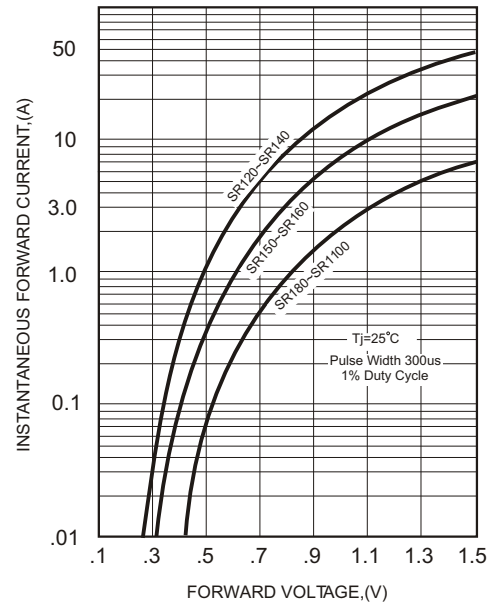
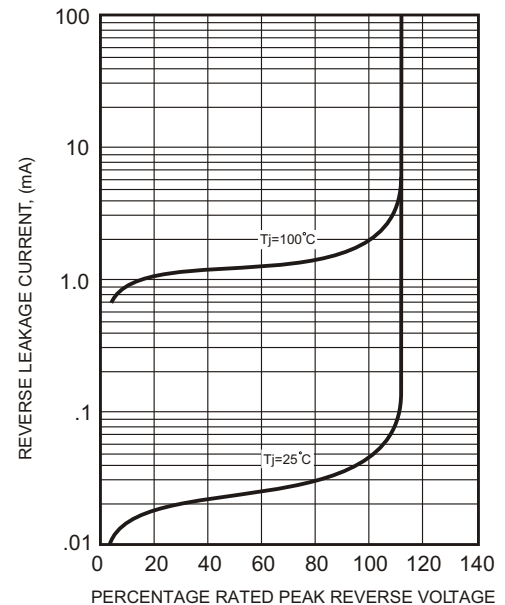


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



SR220 THRU SR2100

GW

2.0 AMP SCHOTTKY BARRIER RECTIFIERS



FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Epitaxial construction

MECHANICAL DATA

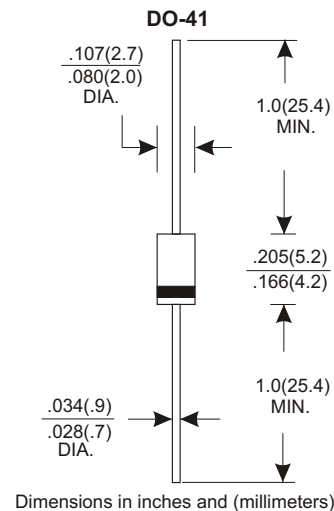
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

VOLTAGE RANGE

20 to 100 Volts

CURRENT

2.0 Ampere



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	SR220	SR230	SR240	SR250	SR260	SR280	SR2100	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	80	100	V
Maximum RMS Voltage	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current	2.0							A
.375"(9.5mm) Lead Length at T _L =100°C								
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	50							A
Maximum Instantaneous Forward Voltage at 2.0A	0.55			0.70		0.85		V
Maximum DC Reverse Current Ta=25°C	0.5			20				mA
at Rated DC Blocking Voltage Ta=100°C								mA
Typical Junction Capacitance (Note1)	170							pF
Typical Thermal Resistance RθJL (Note 2)	12							°C/W
Operating Temperature Range Tj	-65 — +150							°C
Storage Temperature Range Tstg	-65 — +150							°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead Vertical PC Board Mounting 0.375"(9.5mm) Lead Length.

RATING AND CHARACTERISTIC CURVES (SR220 THRU SR2100)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

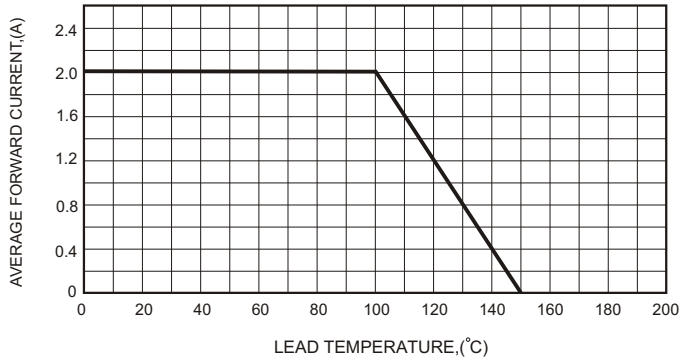


FIG.2-TYPICAL FORWARD CHARACTERISTICS

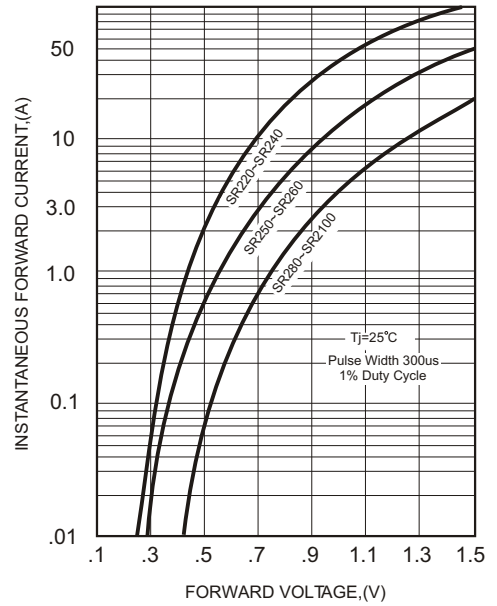


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

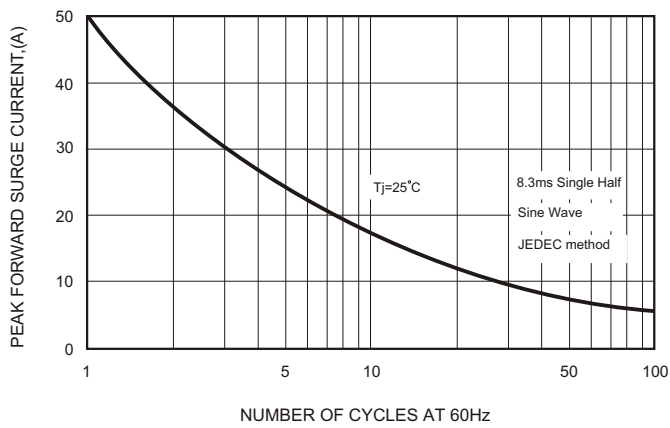


FIG.4-TYPICAL JUNCTION CAPACITANCE

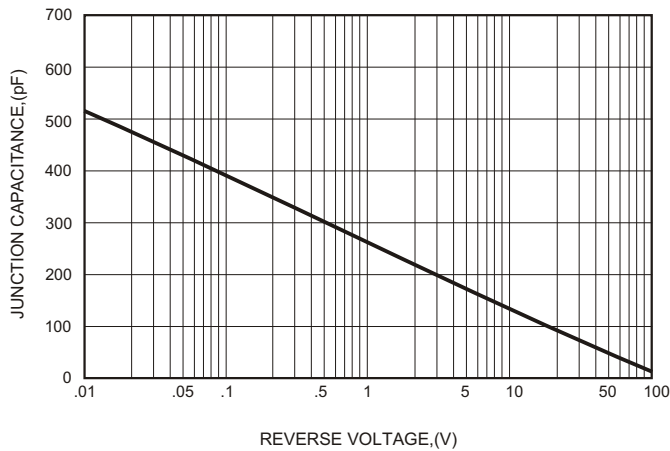


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

