

# Schottky Rectifier



## Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

## Mechanical Data:

Cases : Moulded plastic DO-41  
Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed  
Polarity : Colour band denotes cathode end  
High Temperature  
Soldering Guaranteed : 260°C / 10 seconds / 0.375 inches (9.5mm) lead lengths at 5 lbs., (2.3 kg) tension

## Maximum Ratings and Electrical Characteristics

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

Parameter	Symbol	1N5817+	1N5818+	1N5819+	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	
Maximum Average Forward Rectified Current 0.375 Inches (9.5 mm) Lead Length at $T_L = 90^\circ\text{C}$	$I_{(AV)}$	1			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	25			
Maximum Instantaneous Forward Voltage at 1A	$V_F$	0.45	0.55	0.6	V
Maximum Instantaneous Forward Voltage at 3A		0.75	0.875	0.9	
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$	$I_R$	1 10			mA
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	100			$^\circ\text{C/W}$
	$R_{\theta JC}$	45			
Typical Junction Capacitance (Note 2)	$C_J$	55			pF
Operating Temperature Range	$T_J$	-65 to + 125			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$				

### Notes:

1. Mount on Cu-Pad Size 5 × 5 mm on PCB
2. Measured at 1 MHz and applied reverse voltage of 4V DC



## Specification Table

$I_{F(av)}$ Maximum (A)	$V_{RRM}$ Maximum (V)	$V_F$ (V) at $I_F = 1A$	$I_{FSM}$ (A)	Length	Diameter	Package	Part Number
1	20	0.45	25	5.2	2.7	DO-41	1N5817+
	30	0.55					1N5818+
	40	0.87					1N5819+

Dimensions : Millimetres

## Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

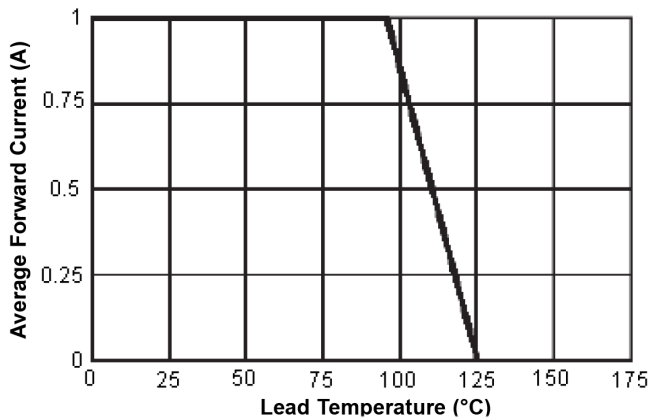


Figure 2 Typical Junction Capacitance

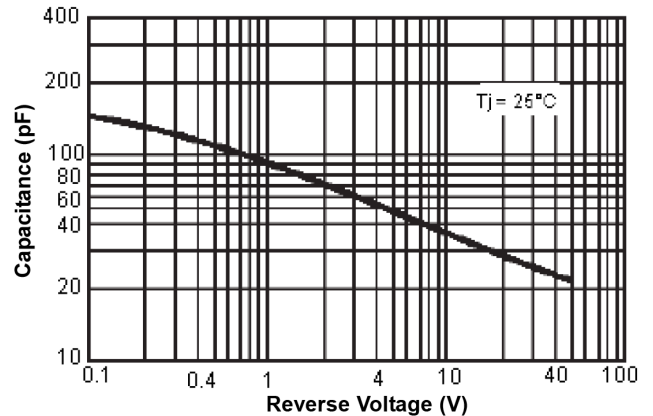


Figure 3 Typical Forward Characteristics

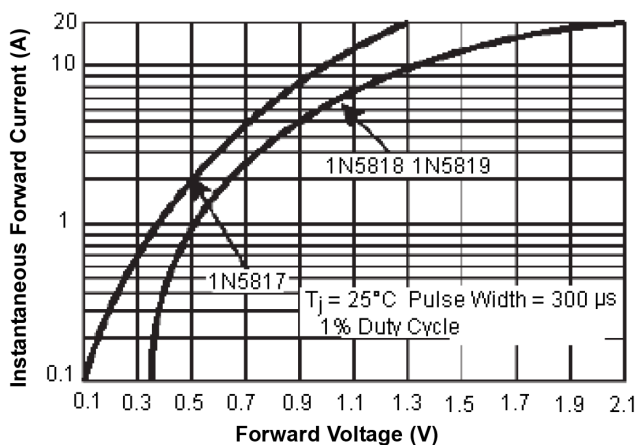
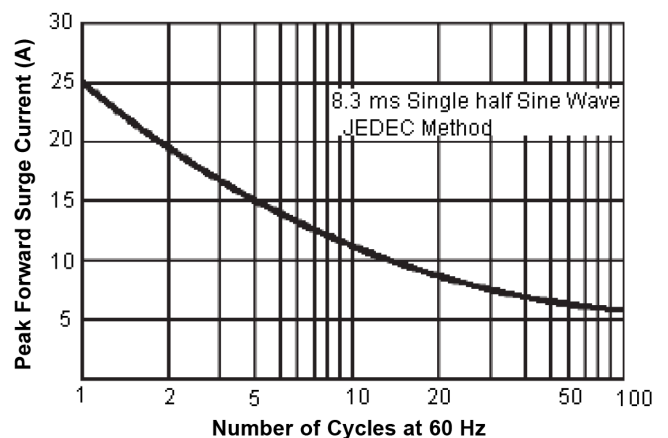
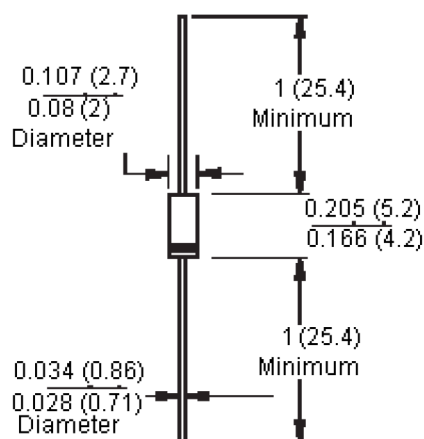


Figure 4 Maximum Non-Repetitive Forward Surge Current



## Dimensions:

### DO-41



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Schottky Rectifier, 20V, 1A	1N5817+
Schottky Rectifier, 30V, 1A	1N5818+
Schottky Rectifier, 40V, 1A	1N5819+

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