

Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

Features

- * Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalanche.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 150°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-0



* *In compliance with EU RoHs 2002/95/EC directives*

SCHOTTKY BARRIER RECTIFIERS

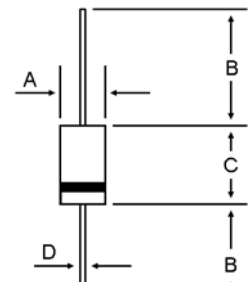
**1.0 AMPERES
20-40 VOLTS**



DO-41

MAXIMUM RATINGS

Characteristic	Symbol	1N5817	1N5818	1N5819	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectifier Forward Current	I_O	1.0			A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	25			A
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150			°C



DIM	MILLIMETERS	
	MIN	MAX
A	2.00	2.70
B	25.40	---
C	4.10	5.20
D	0.70	0.90

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	1N5817	1N5818	1N5819	Unit
Maximum Instantaneous Forward Voltage ($I_F = 1.0$ Amp) ($I_F = 3.0$ Amp)	V_F	0.45 0.75	0.55 0.87		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 125^\circ\text{C}$)	I_R	0.5 10			mA
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	60			°C/W
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f=1$ MHz)	C_P	90	80		pF

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

1N5817 Thru 1N5819

FIG-1 FORWARD CURRENT DERATING CURVE

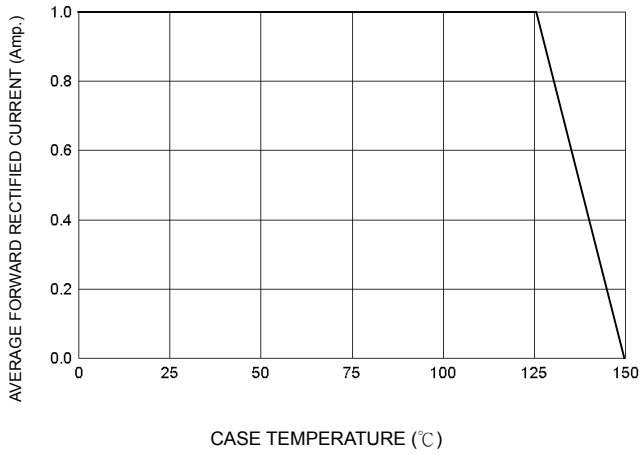


FIG-2 TYPICAL FORWARD CHARACTERISTICS

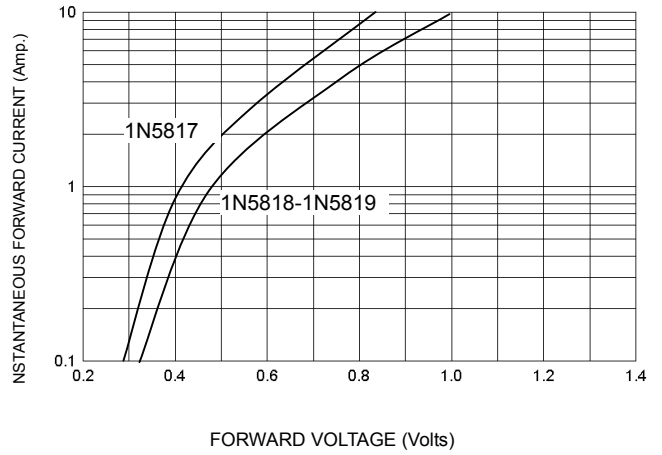


FIG-3 TYPICAL REVERSE CHARACTERISTICS

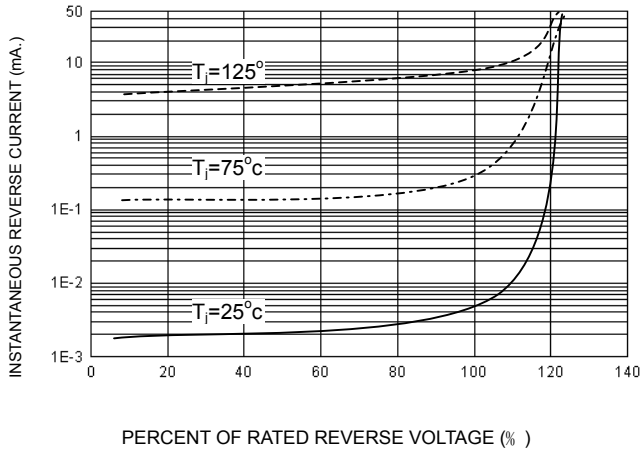


FIG-4 TYPICAL JUNCTION CAPACITANCE

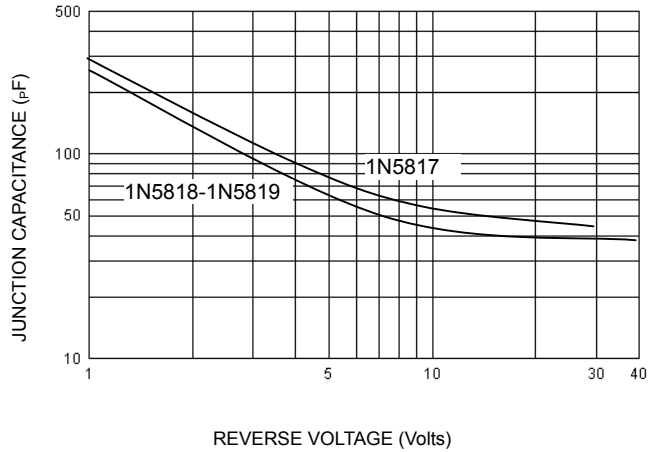
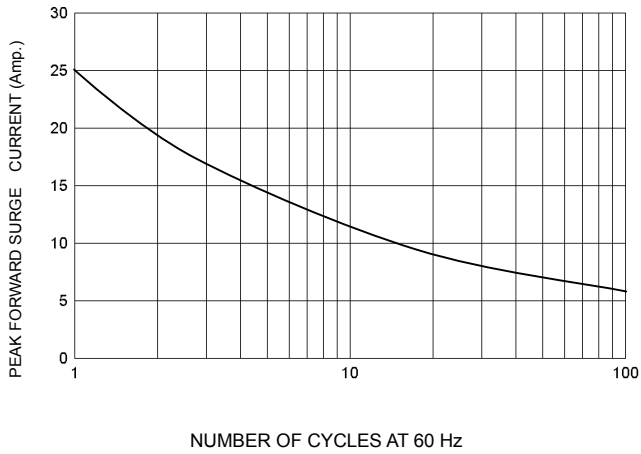


FIG-5 PEAK FORWARD SURGE CURRENT



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