





1.0 Amp. Schottky Barrier Rectifier

DO-204AL (DO-41) 	Voltage 20 V to 40 V	Current 1.0 A	
	FEATURES <ul style="list-style-type: none"> • Low power losses, high efficiency • High surge current capability • High frequency operation • Guarding for overvoltage protection • Low forward voltage drop • Solder dip 260°C, 10s • AEC-Q101 qualified • Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC • Halogen-free available according to IEC 61249-2-21 definition 		  RoHS COMPLIANT 
	MECHANICAL DATA <ul style="list-style-type: none"> • Case: DO-204AL (DO-41). Epoxy meets UL 94V-0 flammability rating. • Polarity: Color band denotes cathode end. • Terminals: Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test 		
	TYPICAL APPLICATIONS Used in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.		

Maximum Ratings and Electrical Characteristics at 25 °C

		1N5817	1N5818	1N5819
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	20	30	40
V_{RMS}	Maximum RMS Voltage (V)	14	21	28
V_{DC}	Maximum DC Blocking Voltage (V)	20	30	40
$I_{F(AV)}$	Maximum Average Forward Rectified Current 9.5mm Lead Length @ $T_c = 90^\circ\text{C}$ (See graphic)	1.0 A		
I_{FSM}	8.3 ms. Peak Forward Surge Current (Jedec Method)	30 A		
C_j	Typical Junction Capacitance	55 pF		
T_j	Operating Temperature Range	-55 to +125 °C		
T_{stg}	Storage Temperature Range	-55 to +150 °C		

Electrical Characteristics at $T_{amb} = 25^\circ\text{C}$

V_F	Maximum Instantaneous Forward Voltage $I_F = 1.0\text{ A}$ (Note 1)	0.45 V	0.550 V	0.600 V
V_F	Maximum Instantaneous Forward Voltage $I_F = 3.0\text{ A}$ (Note 1)	0.750 V	0.875 V	0.900 V
I_R	Maximum DC Reverse Current $T_j = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_j = 125^\circ\text{C}$ (Note 3)	1.0 mA		
		15 mA		
$R_{th(j-a)}$	Typical Thermal Resistance (Note 2)	100 °C/W		
$R_{th(j-c)}$		45 °C/W		

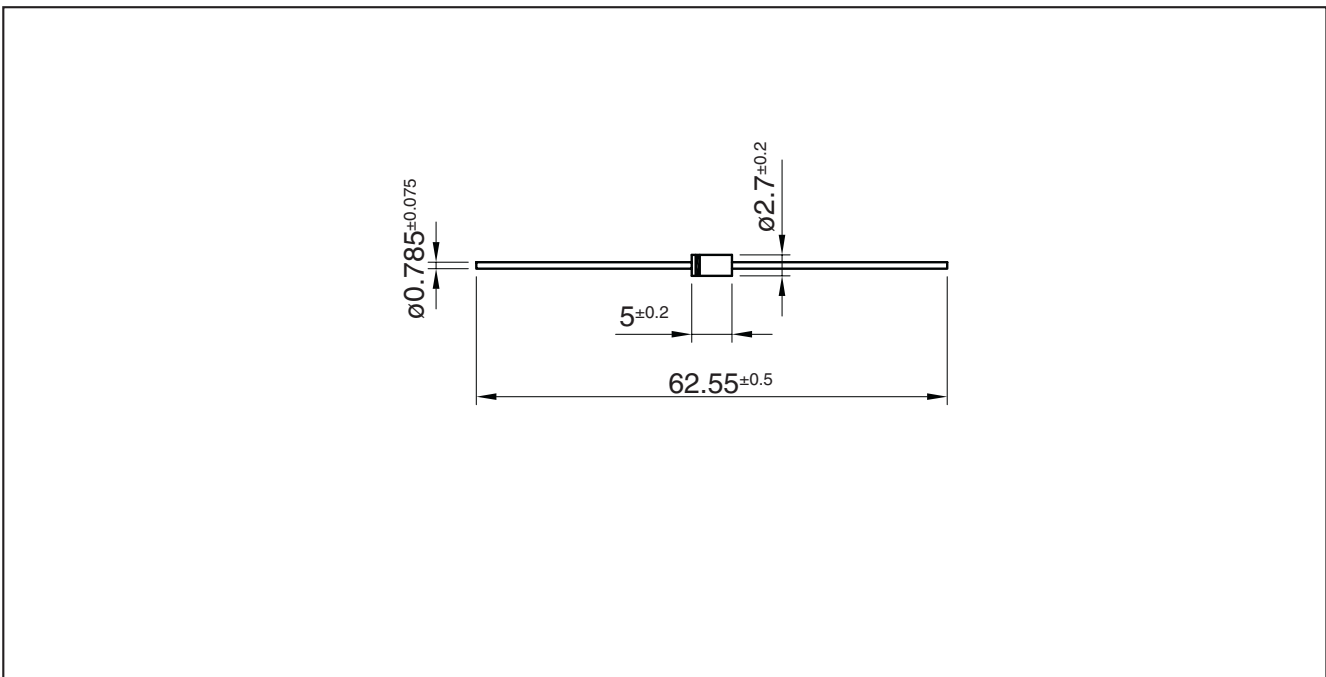
Notes: 1. Pulse Test: 300µ Pulse Width, 1% Duty Cycle
 2. Thermal Resistance from Junction to Case per diode
 3. Pulse test: Pulse width $\leq 40\text{ms}$

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Ordering information

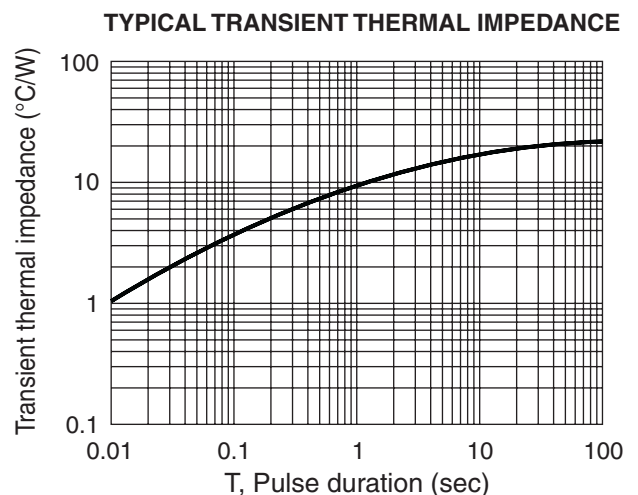
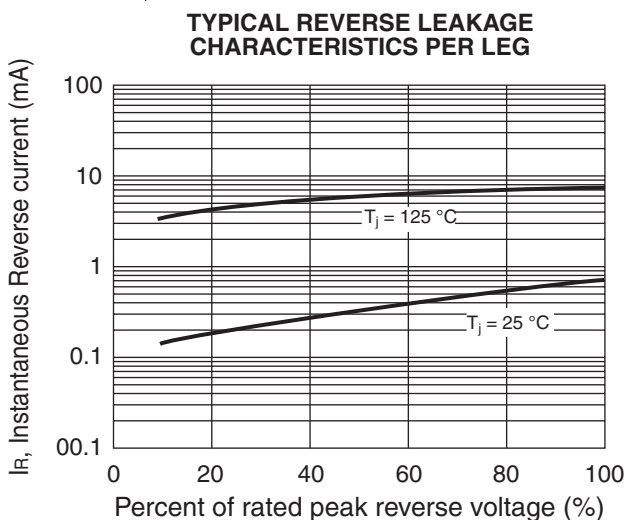
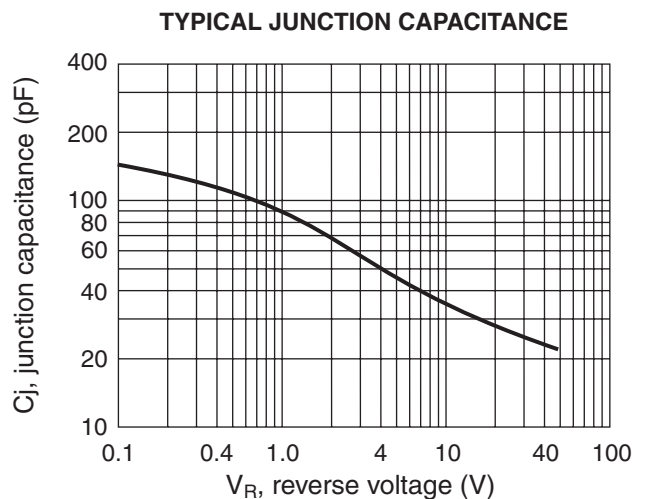
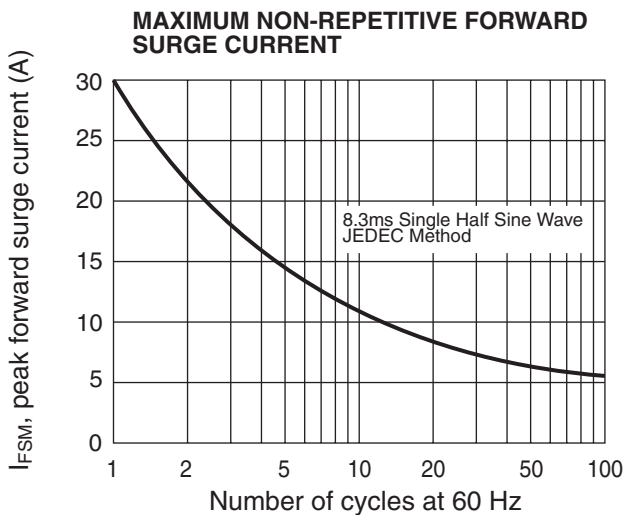
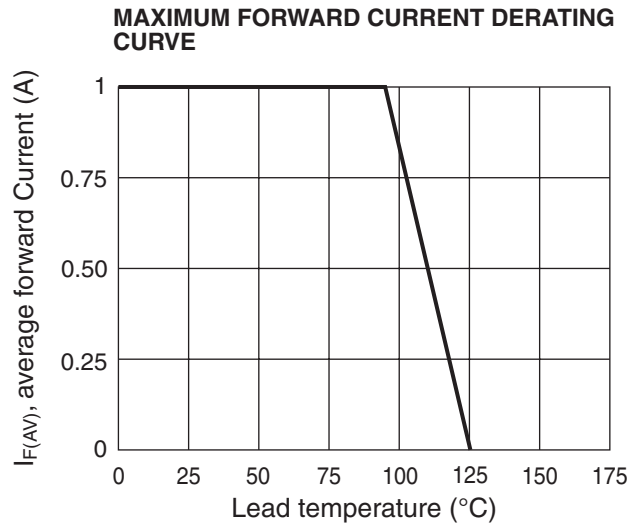
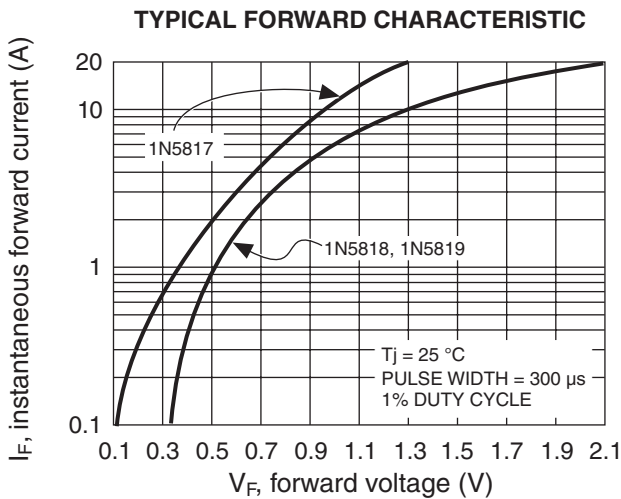
PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
1N5819 AMP	AMP	AMMO BOX	3,000	0.325
1N5819 TR	TR	13" diameter tape and reel	5,000	0.325
1N5819 HF AMP	AMP	AMMO BOX	3,000	0.325
1N5819 HF TR	TR	13" diameter tape and reel	5,000	0.325

Package Outline Dimensions: (mm) DO-204AL (DO-41)



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Ratings and Characteristics (Ta 25 °C unless otherwise noted)



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Revision History

Date	Revision	Description of Changes
14-Oct-2011	0	Original Data Sheet
27-Feb-2013	1	Change: Tj - Tstg, IR & Outline dimensions

Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

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