



## DESCRIPTION

The 1N5817~1N5819 are available in DO213-AA package

## ORDERING INFORMATION

Package Type	Part Number
DO213-AA	1N5817
	1N5818
	1N5819
Note	SPQ: 2,500pcs/Reel
AiT provides all RoHS Compliant Products	

## FEATURES

- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guard ring for overvoltage protection
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Available in DO213-AA package

## MECHANICAL DATA

Case: MiniMELF (DO-213AA), molded plastic body

Terminals: Solder plated, solderable per  
MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any



## ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half-wave, resistive or inductive load. For capacitive load, derate 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	V
Maximum DC Blocking Voltage		$V_{DC}$	20	30	40	V
Maximum Average Forward Rectified Current		$I_{F(AV)}$	1.0			A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)		$I_{FSM}$	25			A
Maximum Instantaneous Forward Voltage	at $I_F=1A$	$V_F$	0.45	0.55	0.6	V
	at $I_F=3A$		0.75	0.875	0.9	
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage <sup>NOTE1</sup>	$T_A=25^{\circ}C$	$I_R$	0.5			mA
	$T_A=100^{\circ}C$		1.0			
Typical Junction Capacitance <sup>NOTE2</sup>		$C_J$	110			pF
Typical Thermal Resistance, Junction to Ambient <sup>NOTE3</sup>		$R_{\theta JA}$	75			°C/W
Typical Thermal Resistance, Junction to Terminal <sup>NOTE4</sup>		$R_{\theta JL}$	30			
Operating Junction Temperature Range		$T_J$	-55 ~+125			°C
Storage Temperature Range		$T_{STG}$	-55 ~+150			°C

NOTE1: Pulse test: 300us pulse width, 1% duty cycle

NOTE2: Measured at 1 MHz and reverse voltage of 4V

NOTE3: Thermal resistance junction to ambient 0.24" x 0.24"(6 x 6 mm) copper pads to each terminals

NOTE4: Thermal resistance junction to terminal 0.24" x 0.24"(6 x 6 mm) copper pads to each terminals



## TYPICAL CHARACTERISTICS

Figure. 1 Forward Current Derating Curve

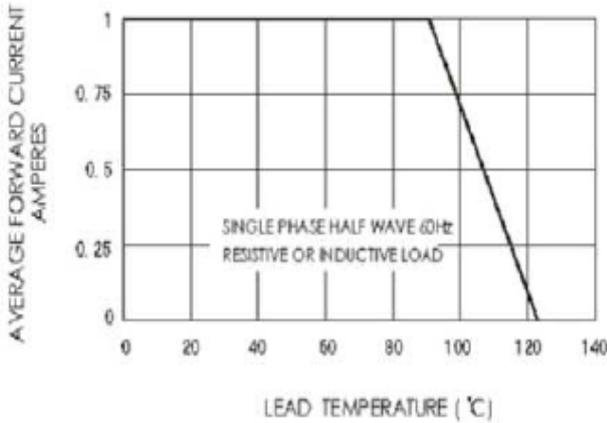


Figure. 2 Maximum Non-Repetitive Peak Forward Surge Current

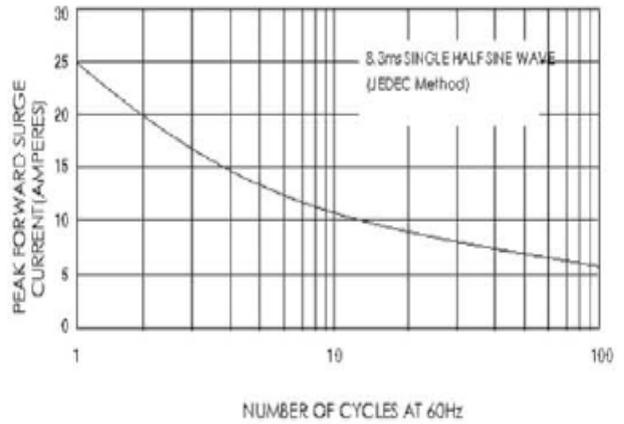


Figure. 3 Typical Instantaneous Forward Characteristics

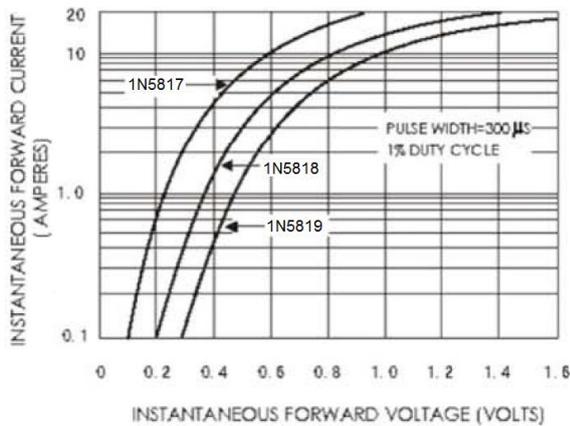


Figure. 4 Typical Reverse Characteristics

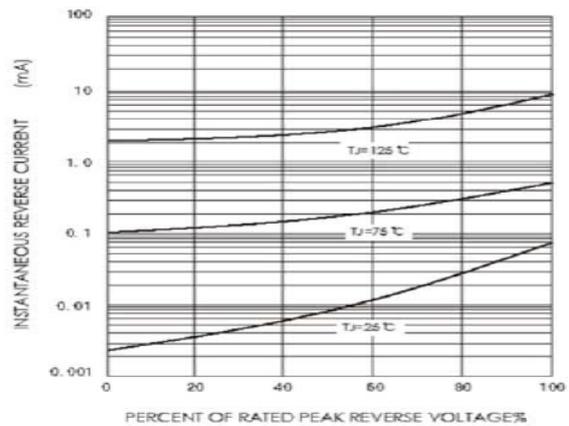
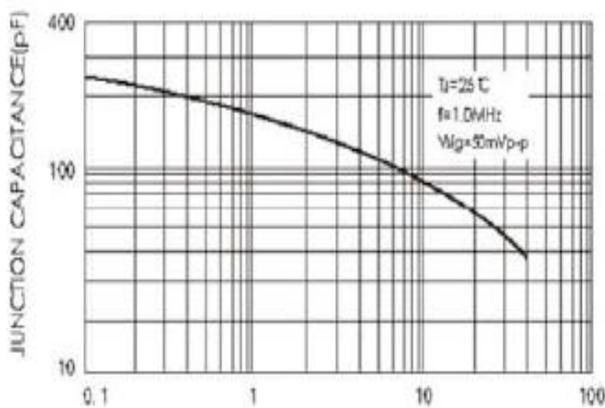


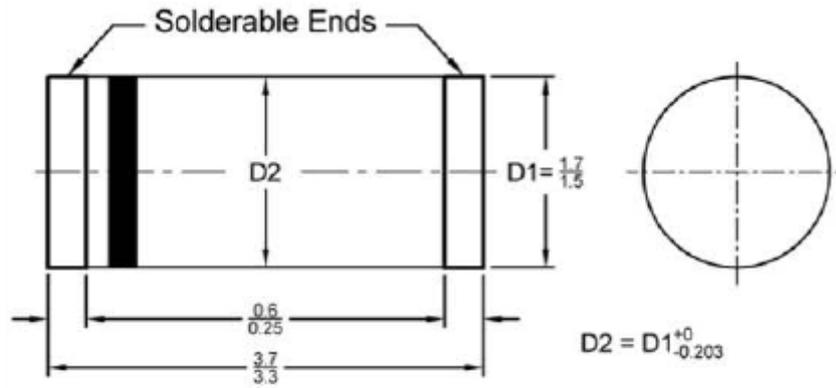
Figure. 5 Typical Junction Capacitance





## PACKAGE INFORMATION

Dimension in DO-213AA (Unit: mm)



Dimensions in millimeters  
MiniMELF



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