

## 1A,1600-2000V High Voltage Rectifiers

### Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- For general purpose applications
- Moisture sensitivity: level 1, per J-STD-020
- For fast switching and low logic level applications
- High temperature soldering guaranteed: 260°C/10 seconds



DO-41(DO-204AL)

### Applications

- Small battery charger, Power supplies

Maximum Ratings & Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)					
Parameter	Symbol	EM513	EM516	EM518	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	1600	1800	2000	V
Maximum RMS voltage	V <sub>RMS</sub>	1120	1260	1400	V
Maximum DC blocking voltage	V <sub>DC</sub>	1600	1800	2000	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	30			A
Operating junction temperature range	T <sub>J</sub>	-55 to +135			°C
Storage temperature range	T <sub>STG</sub>	-55 to +135			°C

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	52	°C /W
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	15	°C /W
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	13	°C /W

## Electrical Specifications (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	EM513	EM516	EM518	Unit
Forward Drop Voltage	V <sub>F</sub>	I <sub>F</sub> =1A	1.10			V
Reverse leakage current @V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	5			uA
		T <sub>J</sub> =100°C	200			
Typical junction capacitance	C <sub>J</sub>	4.0 V 1 MHz	15			pF

Note:

1. Valid provided that leads at a distance of 9.5 mm from case are kept at ambient temperature.

## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

FIG.1-Typ FORWARD SURGE CURRENT

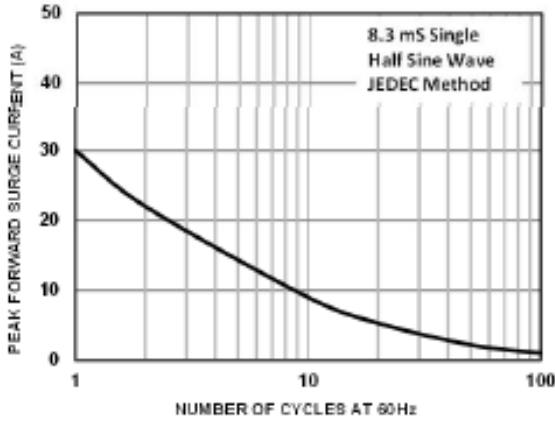


FIG.2-FORWARD CURRENT DERATING CURVE

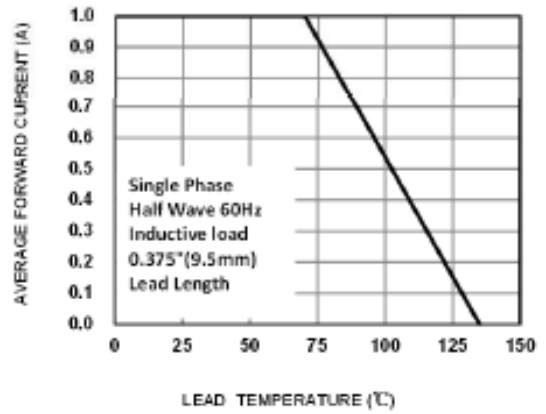


FIG.3-Typ JUNCTION CAPACITANCE

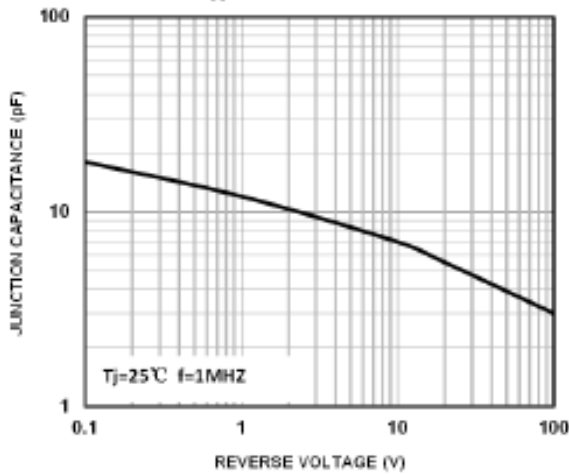


FIG.4-Typ INSTANTANEOUS FORWARD CHARACTERISTICS

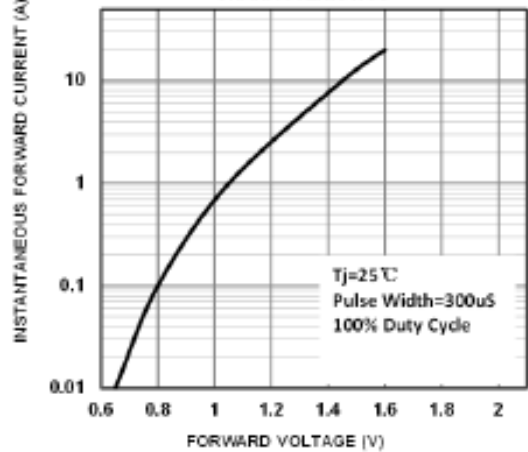
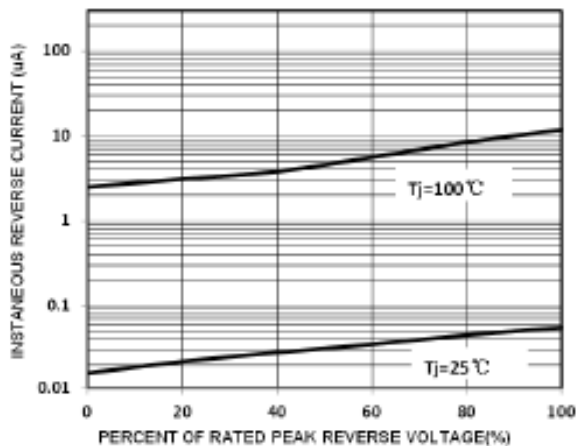


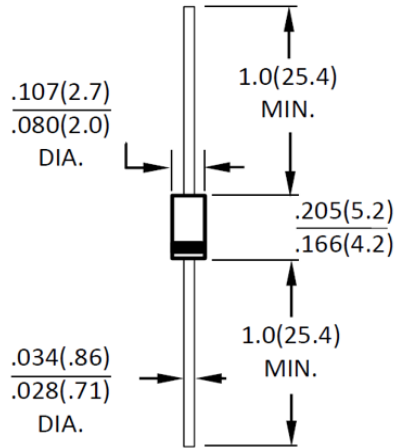
FIG5-Typ REVERSE CHARACTERISTICS



## Package Outline Dimensions

in inches (millimeters)

### DO-41(DO-204AL)



Dimensions in inches and (millimeters)

## Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.12.05	Modify document format

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