

1A,1250-1300V 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 _A =25°C unless otherwise noted)				
Parameter	Symbol	BY127	BY133	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	1250	1300	V
Maximum RMS voltage	V _{RMS}	875	910	V
Maximum DC blocking voltage	V _{DC}	1250	1300	V
Maximum average forward rectified current	I _{F(AV)}	1		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	50		A
Operating junction temperature range	T _J	-55 to +135		°C
Storage temperature range	T _{STG}	-55 to +135		°C

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

Electrical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	BY127	BY133	Unit
Forward Drop Voltage	V _F	I _F =1A	1.10		V
Reverse leakage current @V _R	I _R	T _J =25°C	5		uA
		T _J =100°C	200		
Typical junction capacitance	C _J	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 BURGE CURRENT

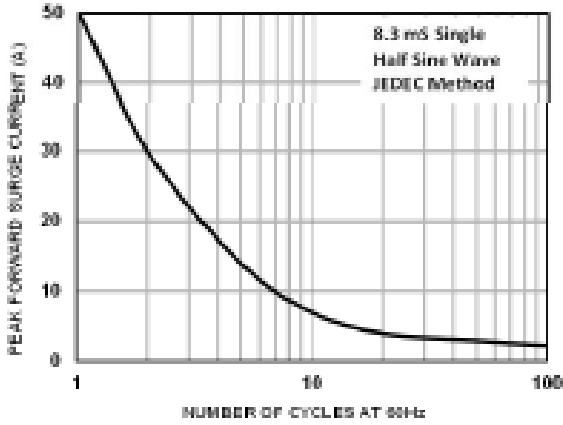


FIG.2-FORWARD CURRENT DERATING CURVE

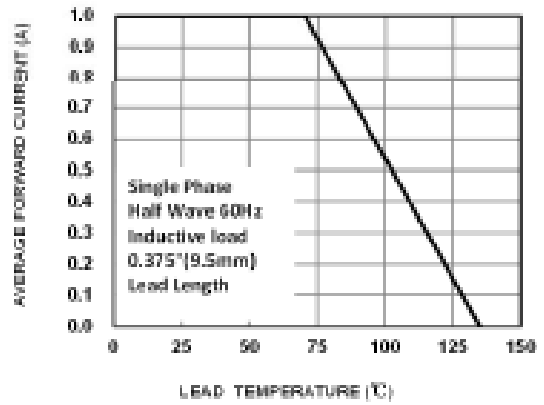


FIG.3-Typ JUNCTION CAPACITANCE

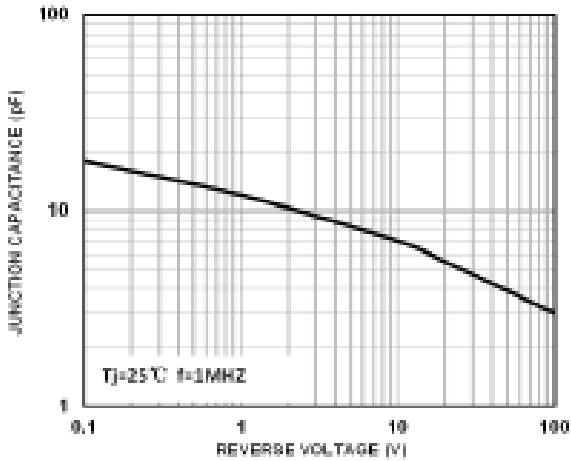


FIG.4-Typ INSTANTANEOUS FORWARD CHARACTERISTICS

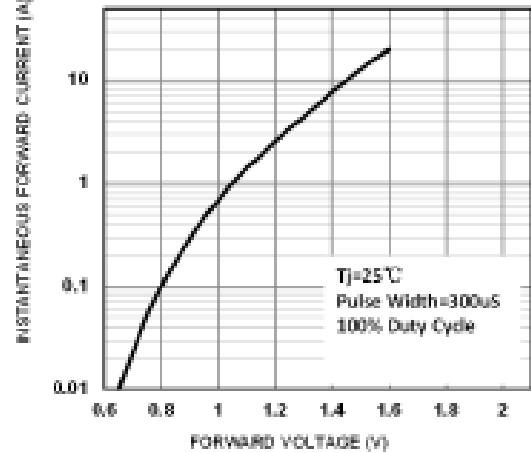
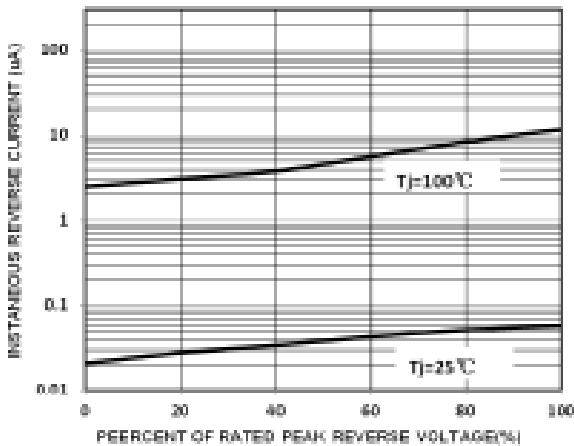


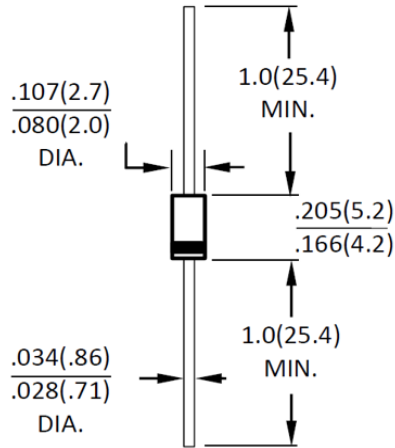
FIG.5-Typ REVERSE CHARACTERISTICS



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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