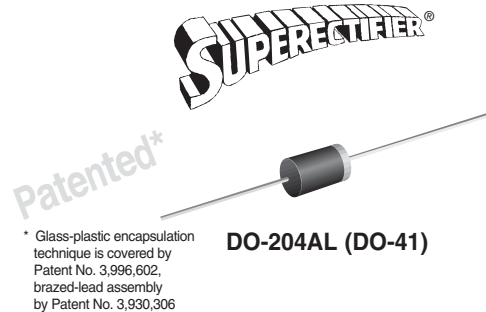




High Voltage Glass Passivated Junction Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	0.25 A
V_{RRM}	1000 V to 4000 V
I_{FSM}	15 A
I_R	5.0 μ A
V_F	3.0 V
T_j max.	175 °C



Features

- Superrectifier structure for High Reliability application
- Cavity-free glass-passivated junction
- Low leakage current
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder Dip 260 °C, 40 seconds



Mechanical Data

Case: DO-204AL, molded epoxy over glass body
Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade, HE3 suffix for high reliability grade (AEC Q101 qualified)

Polarity: Color band denotes cathode end

Typical Applications

For use in rectification of high voltage power supplies, inverters, converters and freewheeling diodes application

Maximum Ratings

($T_A = 25$ °C unless otherwise noted)

Parameter	Symbol	GP02-20	GP02-25	GP02-30	GP02-35	GP02-40	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	2000	2500	3000	3500	4000	V
Maximum RMS Voltage	V_{RMS}	1400	1750	2100	2450	2800	V
Maximum DC blocking voltage	V_{DC}	2000	2500	3000	3500	4000	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 55$ °C	$I_{F(AV)}$	0.25					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	15					A
Operating junction and storage temperature range	T_J, T_{STG}	- 65 to + 175					°C

Electrical Characteristics

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

Parameter	Test condition	Symbol	GP02-20	GP02-25	GP02-30	GP02-35	GP02-40	Unit
Maximum instantaneous forward voltage	at 1.0 A	V_F	3.0					V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 100\text{ }^\circ\text{C}$	I_R	5.0 50					μA
Typical reverse recovery time	at $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $t_{rr} = 0.25\text{ A}$	t_{rr}	2.0					μs
Typical junction capacitance	at 4.0 V, 1 MHz	C_J	3.0					pF

Thermal Characteristics

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

Parameter	Symbol	GP02-20	GP02-25	GP02-30	GP02-35	GP02-40	Unit
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	130					$^\circ\text{C/W}$

Notes:

(1) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

* JEDEC registered values

Ratings and Characteristics Curves

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

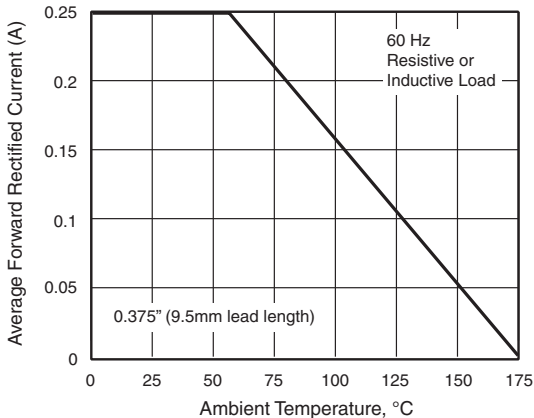


Figure 1. Forward Current Derating Curve

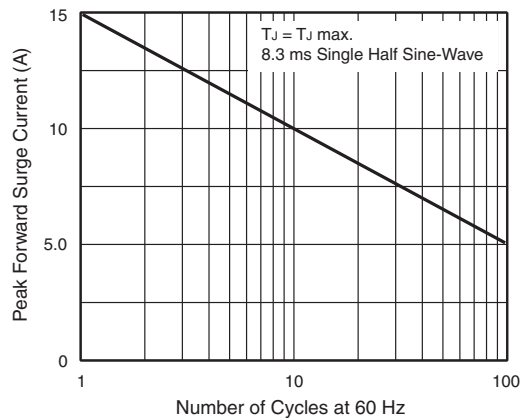


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

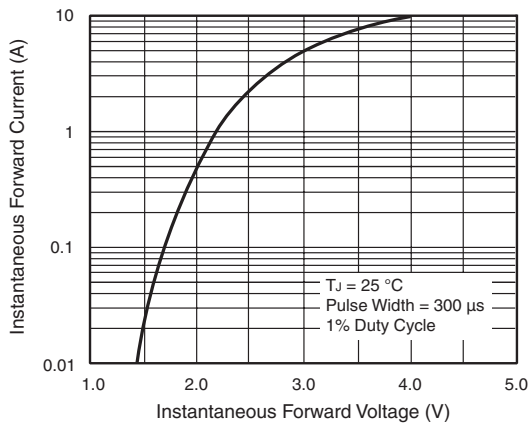


Figure 3. Typical Instantaneous Forward Characteristics

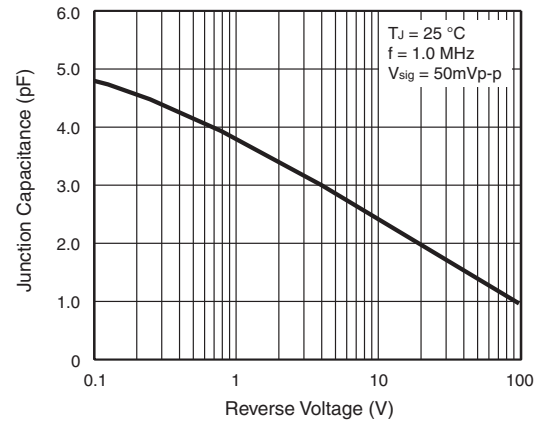


Figure 5. Typical Junction Capacitance

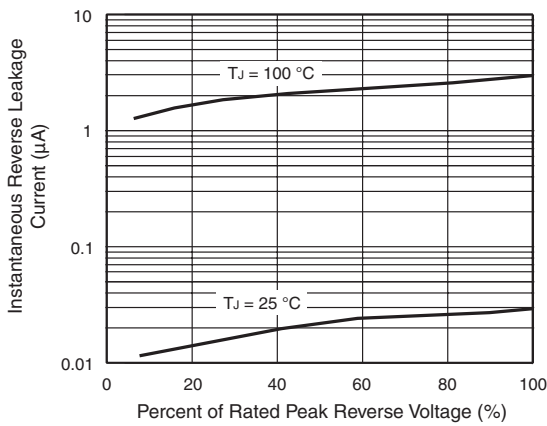
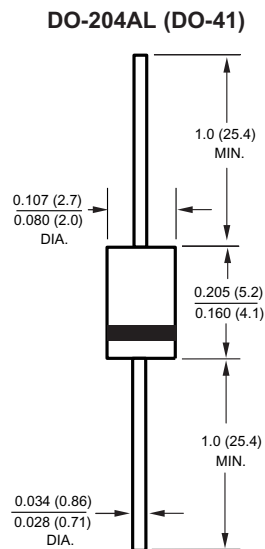


Figure 4. Typical Reverse Characteristics

Package outline dimensions in inches (millimeters)





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