SURFACE MOUNT GENERAL RECTIFIERS
Reverse Voltage – 50 to 1000 Volts
Forward Current – 3.0 Amperes

Features

- High current capability
- Low leakage current
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Expsemi electronics

Mechanical Data

- Case: Molded plastic, DO-201AD
- Terminals: Plated axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any

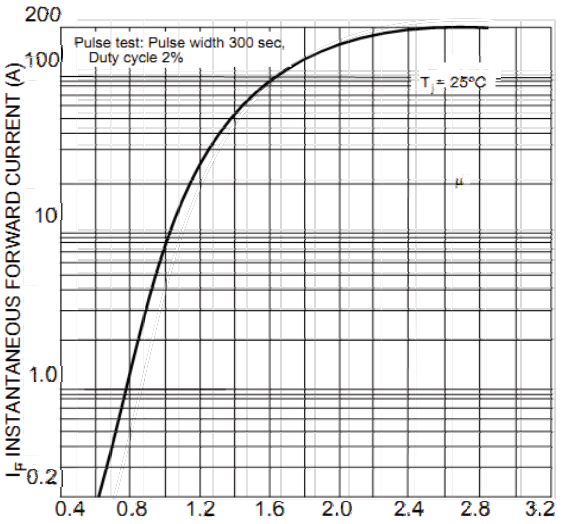
Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	1N 5400G	1N 5401G	1N 5402G	1N 5403G	1N 5404G	1N 5405G	1N 5406G	1N 5407G	1N 5408G	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	500	600	800	1000	V
Maximum Average Forward Rectified Current 0.375"(9.5 mm) Lead Length at T_A = 105°C	$I_{(AV)}$	3									A
Peak Forward Surge Current, 8.3 ms Single Half-sine-wave Superimposed on rated load (JEDEC method)	I_{FSM}	125									A
Maximum Forward Voltage at 3 A DC	V_F	1.1									V
Maximum Reverse Current T_A = 25 °C at Rated DC Blocking Voltage T_A = 125 °C	I_R	10 100									μA
Typical Junction Capacitance [1]	C_J	40									pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	30									°C/W
Operating Junction Temperature Range	T_J	-55 to +150									°C
Storage Temperature Range	T_{stg}	-55 to +150									°C

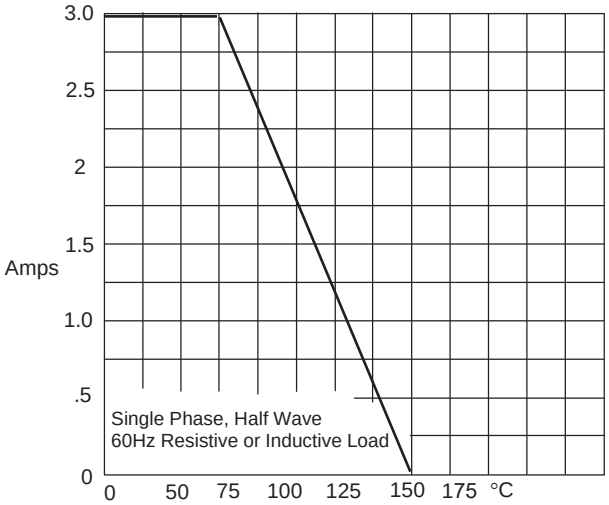
[1] Measured at 1 MHz and applied reverse voltage of 4 VDC.
[2] Thermal resistance junction to ambient and juntion to lead at 0.375" (9.5 mm) lead length P.C.B mounted with 0.8 X 0.8" (20 X 20 mm) copper pads.

Figure 1
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes
Ambient Temperature -°C *versus*

Figure 3
Junction Capacitance

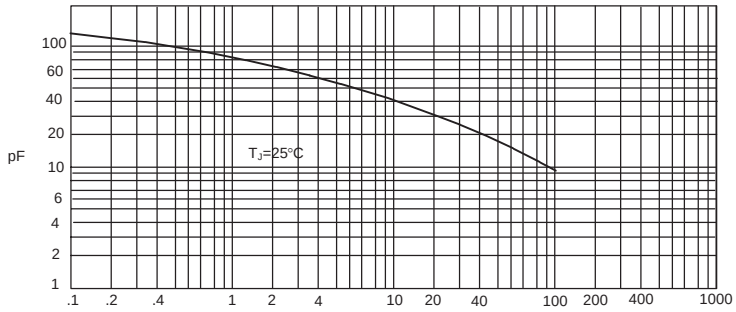
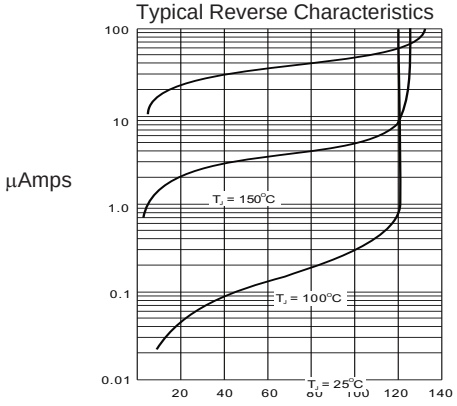
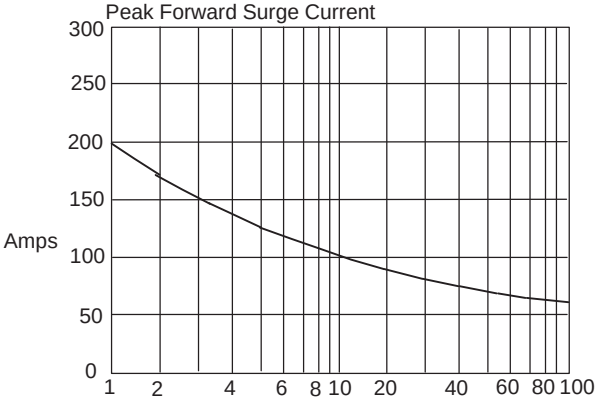


Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

DO-201AD Outline Dimensions