

**Glass Passivated Fast Recovery Rectifier**
**DO-41/A405**

**Features**

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020  
LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874


**Primary characteristics**

$I_{F(AV)}$	1A
$V_{RRM}$	50V to 1000V
$I_{FSM}$	30A
$I_{RM}$	5 $\mu$ A
$V_{FM}$ at $I_F=1$ A	1.3V
$T_J$ max.	150 °C

**Applications**

Ideal for ac-to-dc bridge full wave rectification such as SMPS, home appliances, office equipment, industrial automation applications

**Mechanical data**

- DO-41/A405
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque: 10cm·kg(8.8 inches·lbs)max.
- Recommended Torque: 5.7 cm·kg(5 inches·lbs)

**Maximum rating ( $T_a=25^\circ\text{C}$  unless otherwise noted)**

Parameter	Sym	DO-41/A405							Unit
		FR 101G	FR 102G	FR 103G	FR 104G	FR 105G	FR 106G	FR 107G	
Max. repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Max. RMS reverse voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Max. DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Max. average forward current	$I_{F(AV)}$	1							A
Non-repetitive peak forward surge current 8.3ms single half-sine-wave	$I_{FSM}$	30							A
Max. instantaneous forward voltage drop per diode	$V_{FM}$	1.3 (1A)							V
Max. instantaneous reverse current at rated DC blocking voltage	$I_{RM}$	$T_a=25^\circ\text{C}$							$\mu\text{A}$
		$T_a=125^\circ\text{C}$							
Operating junction temperature	$T_J$	-55 ~ +150							°C
Storage temperature	$T_{STG}$	-55 ~ +150							°C
Maximum reverse recovery time (Note 1)	$t_{rr}$	150			250		500		nS
Typical junction capacitance (Note 2)	$C_J$	12							pF

**Notes:**

1 Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25$

2 Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C



Ordering information (Example)

PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
FR107G				

Typical characteristics

FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

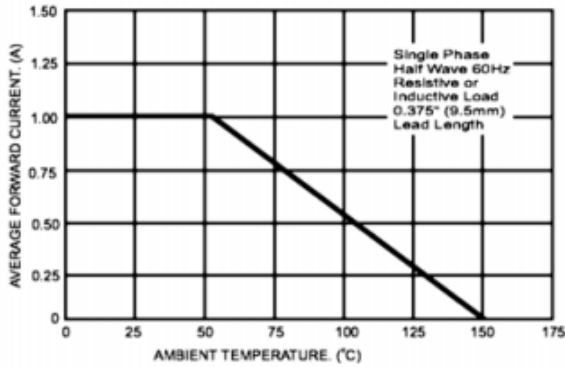


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

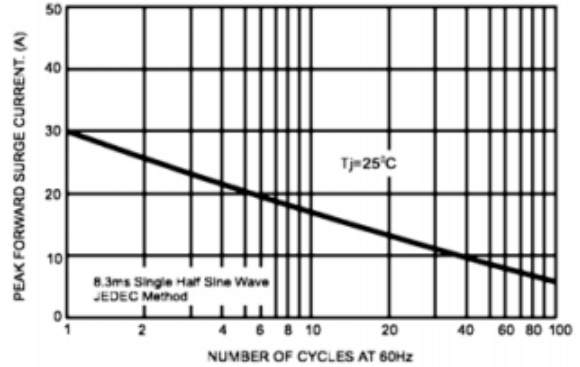


FIG.4- TYPICAL JUNCTION CAPACITANCE

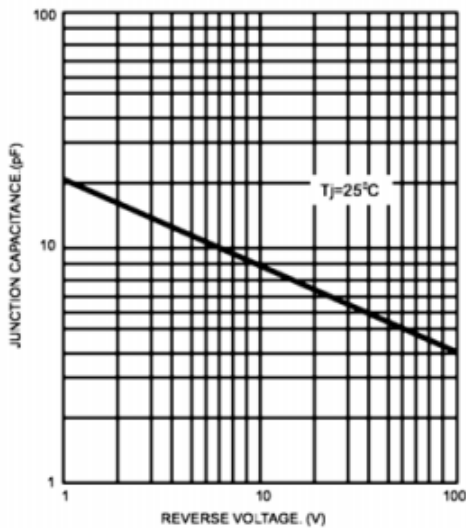
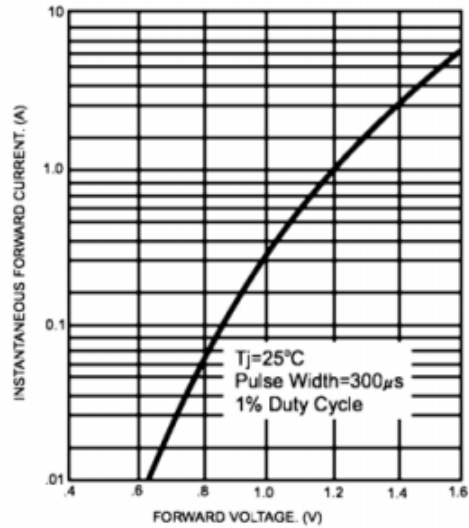
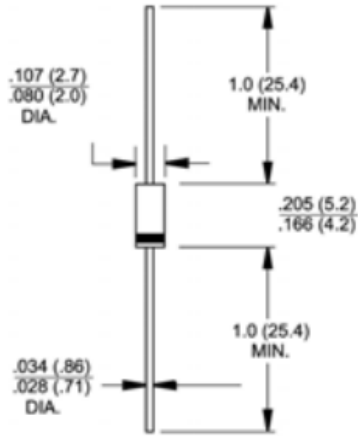


FIG.5- TYPICAL FORWARD CHARACTERISTICS

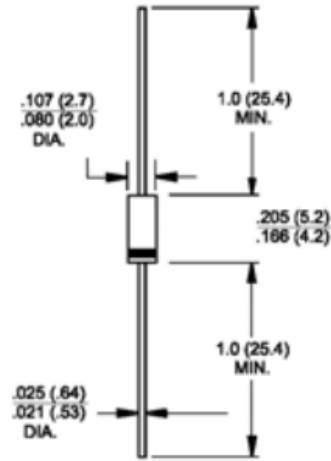


**Package outline dimensions**

**DO-204AL (DO-41)**



**A-405**



Dimensions in inches and (millimeters)      Dimensions in inches and (millimeters)

**Note:** Lead diameter is 0.025(0.64)/0.021(0.53) for part numbers from FR101SG thru FR107SG

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