



# ARGP10D THRU ARGP10M

## Fast Soft-Recovery Controlled Avalanche Rectifiers



Voltage Range  
200 to 1000 Volts

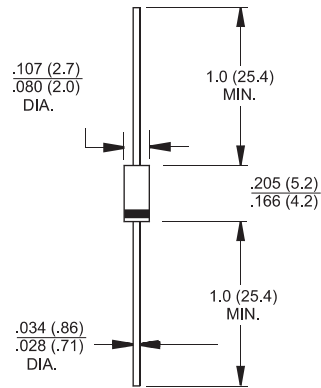
### Features

- ✦ High temperature metallurgically bonded constructed
- ✦ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✦ Glass passivated cavity-free junction
- ✦ High maximum operating temperature
- ✦ Low leakage current
- ✦ Excellent stability
- ✦ Guaranteed avalanche energy absorption capability
- ✦ High temperature soldering guaranteed:  
350°C / 10 seconds, 0.375"(9.5mm) lead length, 5 lbs., (2.3kg) tension.

### Mechanical Data

- ✦ Case: JEDEC DO-41 molded plastic over glass body
- ✦ Lead: Plated Axial leads, solderable per MIL-STD-750, Method 2026
- ✦ Polarity: Color band denotes cathode end
- ✦ Mounting position: Any
- ✦ Weight: 0.012 ounce, 0.3 gram

### DO-41



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Type Number	Symbol	ARGP 10D	ARGP 10G	ARGP 10J	ARGP 10K	ARGP 10M	Units	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	1000	V	
Maximum RMS Voltage	$V_{RMS}$	140	280	420	560	700	V	
Maximum DC Blocking Voltage	$V_R$	200	400	600	800	1000	V	
Min. Reverse Avalanche Breakdown Voltage @ $I_R=0.1mA$	$V_{(BR)R}$	300	500	700	900	1100	V	
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ $T_{tp} = 55^\circ C$	$I_{F(AV)}$	1.3						A
Peak Forward Surge Current @ $t = 8.3$ ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) @ $t = 10ms$ half sine wave, $T_J = T_{jmax}$ prior to surge, $V_R = V_{RRMmax}$	$I_{FSM}$	30						A
		20						A
Non-repetitive Peak Reverse Avalanche Energy $L=120mH$ $T_J=125^\circ C$ max prior to Surge, Inductive load Switched off	$E_{RSM}$	10			7		mJ	
Maximum Instantaneous Forward Voltage @ $I_F = 1.0A$ @ $I_F = 1A$ , $T_J = T_{jmax}$ .	$V_F$	1.3					V	
		1.1					V	
Maximum DC Reverse Current @ $T_J=25^\circ C$ at Rated DC Blocking Voltage @ $T_J=165^\circ C$	$I_R$	1.0					$\mu A$	
		100.0					$\mu A$	
Maximum Reverse Recovery Time ( Note 1 ) $T_J=25^\circ C$	$T_{rr}$	250			300		nS	
Typical Junction Capacitance ( Note 2 )	$C_j$	15.0					pF	
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta TP}$	120					$^\circ C/W$	
		55					$^\circ C/W$	
Operating Temperature Range $T_J$	$T_J$	-65 to + 175					$^\circ C$	
Storage Temperature Range $T_{STG}$	$T_{STG}$	-65 to + 175					$^\circ C$	

Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$  Recover to 0.25A.

2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0 Volts.

3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (ARGP10D THRU AGRP10M)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

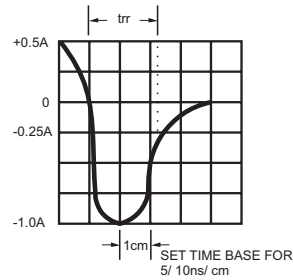
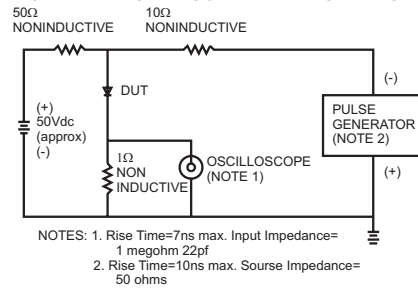


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

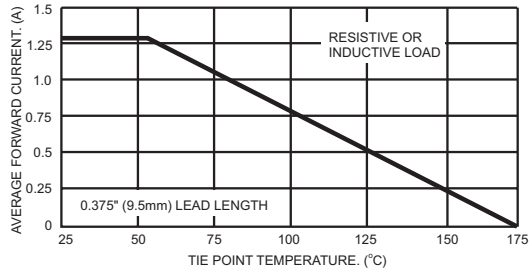


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

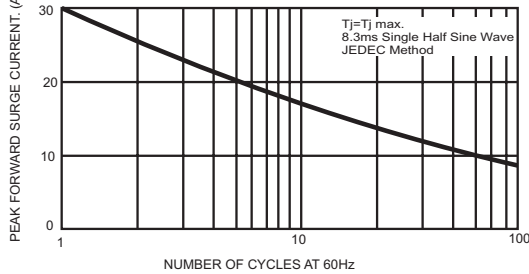


FIG.4- TYPICAL JUNCTION CAPACITANCE

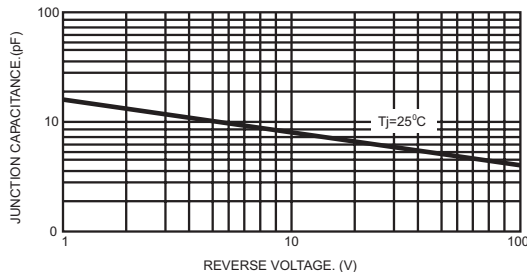


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

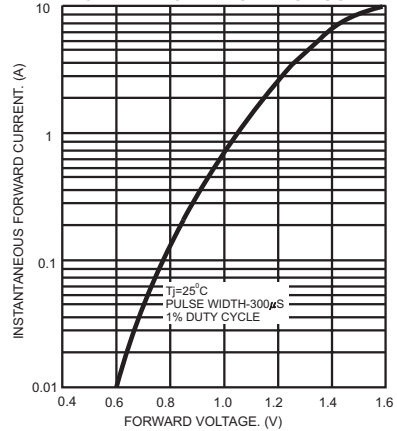


FIG.6- TYPICAL REVERSE CHARACTERISTICS

