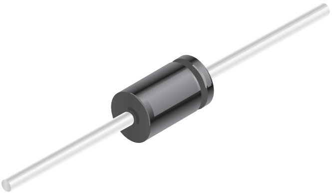
FAIRCHILD
SEMICONDUCTOR TM

RGP10A - RGP10M

Features

- 1.0 ampere operation at T_A = 55°C with no thermal runaway.
- High temperature metallurgically bonded construction.
- Glass passivated cavity-free junction.
- Typical I_R less than 1µA.
- Fast switching for high efficiency.



DO-41
COLOR BAND DENOTES CATHODE

1.0 Ampere Glass Passivated Fast Recovery Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$I_{F(AV)}$	Average Rectified Current .375 " lead length @ T_L = 55°C	1.0	A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
P_D	Total Device Dissipation Derate above 25°C	2.5 17	W mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	°C/W
T_{stg}	Storage Temperature Range	-65 to +175	°C
T_J	Operating Junction Temperature	-65 to +175	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

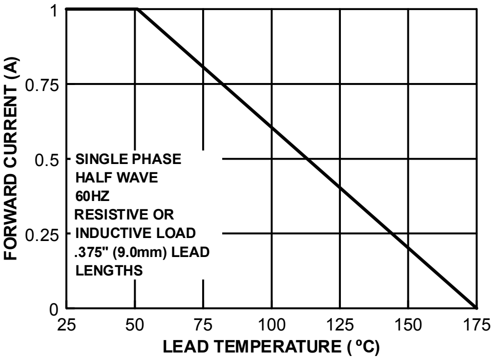
Electrical Characteristics

T_A = 25°C unless otherwise noted

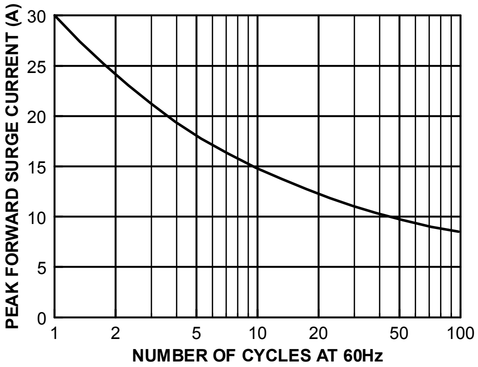
Symbol	Parameter	Device							Units
		10A	10B	10D	10G	10J	10K	10M	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS Voltage	35	70	140	280	420	560	700	V
V_R	DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
I_R	Maximum Instantaneous Reverse Current @ rated V_R T_A = 25°C T_A = 150°C	5.0 200							µA µA
t_{rr}	Maximum Instantaneous Reverse Recovery Time I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	150				250	500		ns
V_{FM}	Maximum Forward Voltage @ 1.0 A	1.3							V
C	Typical Junction Capacitance V_R = 4.0 V, f = 1.0 MHz	15							pF

Typical Characteristics

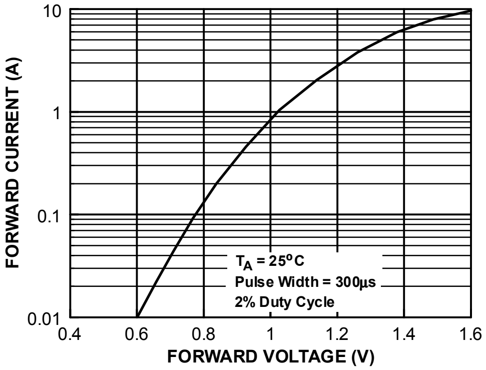
Forward Current Derating Curve



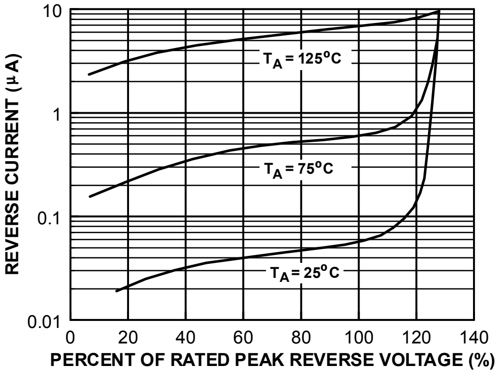
Non-Repetitive Surge Current



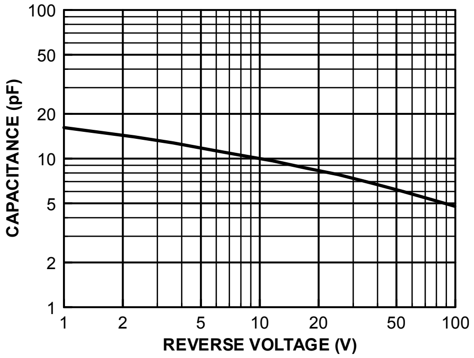
Forward Characteristics

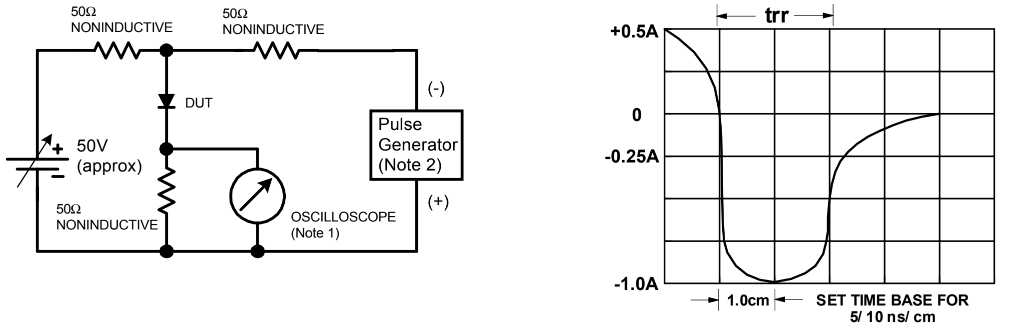


Reverse Characteristics



Junction Capacitance

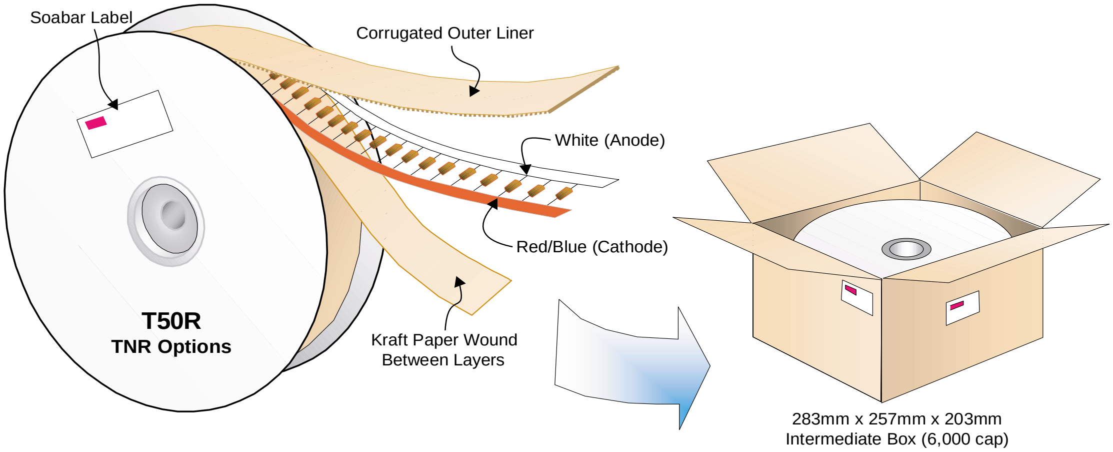




Reverse Recovery Time Characterstic and Test Circuit Diagram

DO-41 (Glass) Tape and Ammo Data

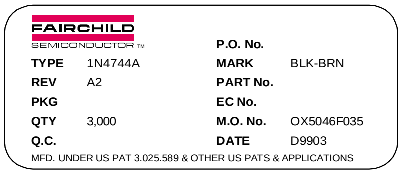
DO-41 (Glass) Packaging Configuration: Figure 1.0



DO-41 (Glass) Packaging Information Table : Figure 2.0

DO-41 (Glass) Packaging Information			
Packaging Option	T50R	T50A	Standard (no flow code)
Packaging type	TNR	Ammo	Bag
Qty per Reel/Tube/Bag	3,000	3,000	250
Reel Size (inch diameter)	10.5	-	-
Inside Tape Spacing (mm)	52	52	-
Int Box Dimension (mm)	283x257x203	406x267x184	381x203x127
Max qty per Box	6,000	30,000	5,000
Weight per unit (gm)	0.320	0.320	0.320
Weight per Reel (kg)	1.356	1.077	-
Note/Comments			Bulk

Soabar Label sample



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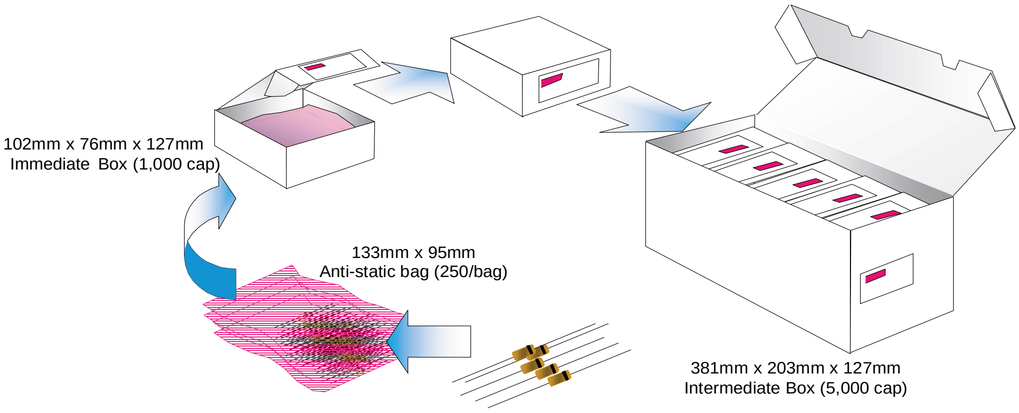
		P.O. No.	
TYPE	1N4744A	**MARK**	BLK-BRN
REV	A2	**PART No.**	
PKG		**EC No.**	
QTY	3,000	**M.O. No.**	OX5046F035
Q.C.		**DATE**	D9903

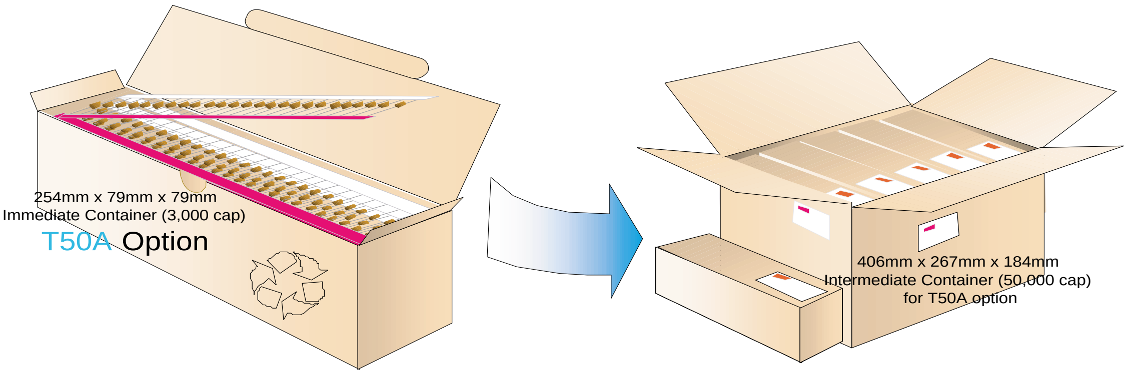
MFD. UNDER US PAT 3.025.589 & OTHER US PATS & APPLICATIONS

DO-41 (Glass) Bulk Packing Configuration: Figure 3.0

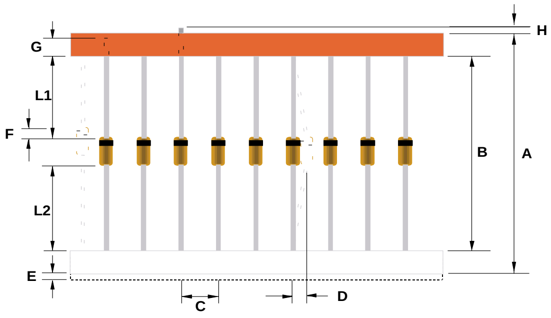


DO-41 (Glass) Tape and Ammo Data, continued

DO-41 (Glass) Ammo Packing
Configuration: Figure 4.0



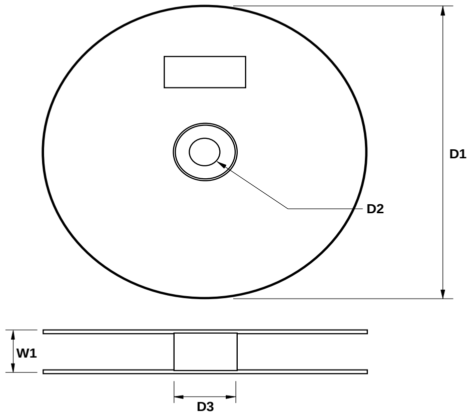
DO-41 (Glass) Taping
Dimension: Figure 5.0



TAPING DIMENSIONS

	INCH	MM	MILS	NOTES
A	2.520 +0.066/ -0.027	64.00 +1.69/ -0.69	2519 +66.5/ -27.0	Overall width
B	2.047±0.027	52 ±0.69	2047±27	Inside Tape Spacing
C	0.200 ±0.0157	5.08 ±0.40	200 ±15.7	Component Pitch
D	0.047(max)	1.2(max)	47(max)	Component Misalignment
E	0.022(max)	0.55(max)	22(max)	Tape Mismatch
F	0.027(max)	±0.69	±27	Units in line w/ one another
G	0.126(min)	3.2(min)	126(min)	Lead amount between tapes
H	0	0	0	Lead amount beyond tapes
L1-L2	±0.027	±0.69	±27	Delta between two leads

DO-41 (Glass) Reel
Dimension: Figure 6.0



REEL DIMENSIONS

ITEM DESCRIPTION	SYMBOL	MINIMUM	MAXIMUM
Reel Diameter	D1	10.375	10.625
Arbor Hole Diameter (Standard)	D2	1.245	1.255
Core Diameter	D3	3.190	3.310
Flange to Flange Outer Width	W1		3.400

Note: All Dimensions are in inches

DO-41 (Glass) Package Dimensions

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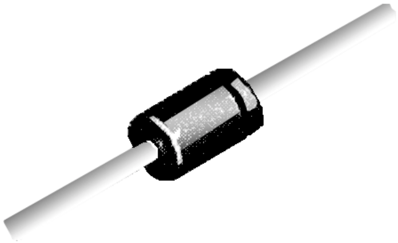
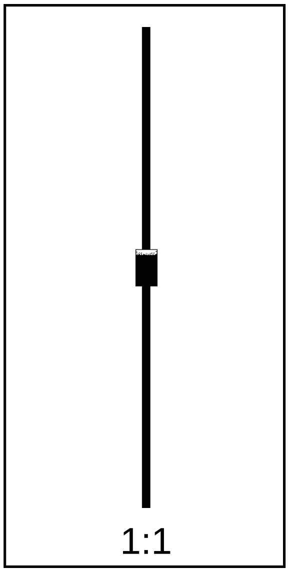
DO-41 (FS PKG Code D4)

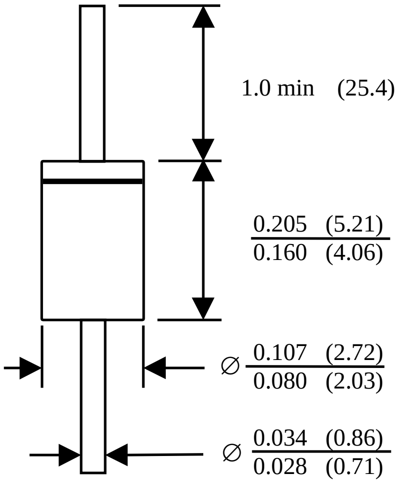




Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

Part Weight per unit (gram): 0.32



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