

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**Micro Commercial Components** 



Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

Phone: (818) 701-4933 Fax: (818) 701-4939 FR151 THRU FR157

#### **Features**

- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- High Current Capability
- Fast Switching Speed For High Efficiency
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC	Device	Maximum	Maximum	Maximum
Catalog	Marking	Recurrent	RMS	DC
Number		Peak Reverse	Voltage	Blocking
		Voltage	_	Voltage
FR151	FR151	50V	35V	50V
FR152	FR152	100V	70V	100V
FR153	FR153	200V	140V	200V
FR154	FR154	400V	280V	400V
FR155	FR155	600V	420V	600V
FR156	FR156	800V	560V	800V
FR157	FR157	1000V	700V	1000V

### Bectrical Characteristics @ 25°C Unless Otherwise Specified

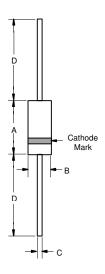
dectrical Grafacteristics @25 Comess Otherwise Specified				
Average Forward	I <sub>F(AV)</sub>	1.5 A	$T_A = 55^{\circ}C$	
Current				
Peak Forward Surge	I <sub>FSM</sub>	50A	8.3ms, half sine	
Current				
Maximum			$I_{FM} = 1.5A;$	
Instantaneous	$V_{F}$	1.3V	$T_A = 25^{\circ}C$	
Forward Voltage				
Maximum DC				
Reverse Current At	I <sub>R</sub>	5.0μΑ	$T_A = 25^{\circ}C$	
Rated DC Blocking		100μΑ	$T_A = 100^{\circ}C$	
Voltage		•		
Maximum Reverse				
Recovery Time				
FR151-154	$T_{rr}$	150ns	$I_F=0.5A, I_R=1.0A,$	
FR155		250ns	I <sub>rr</sub> =0.25A	
FR156-157		500ns		
Typical Junction	CJ	20pF	Measured at	
Capacitance		-	1.0MHz, V <sub>R</sub> =4.0V	

<sup>\*</sup>Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

# 1.5 Amp Fast Recovery Rectifier 50 to 1000 Volts

## DO-15



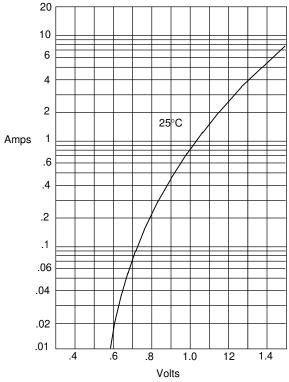
DIMENSIONS						
	INCHES		MM			
DIM	MIN	MAX	MIN	MAX	NOTE	
Α	.230	.300	5.80	7.60		
В	.104	.140	2.60	3.60		
С	.026	.034	.70	.90		
_	4 000		05.40			

## FR151 thru FR157

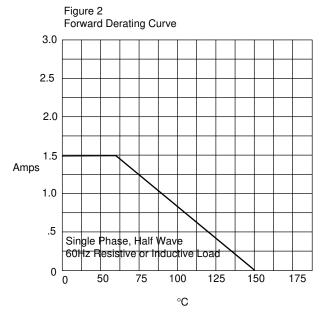
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**Micro Commercial Components** 

Figure 1 Typical Forward Characteristics

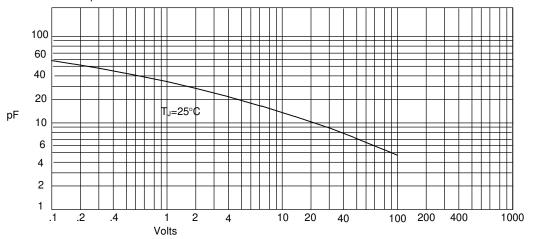


Instantaneous Forward Current - Amperesversus
Instantaneous Forward Voltage - Volts



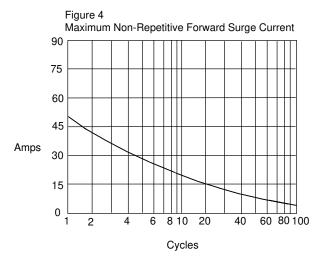
Average Forward Rectified Current - Amperes*versus* Ambient Temperature -°C





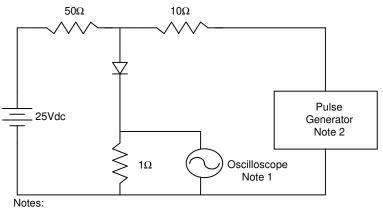
Junction Capacitance - pF*versus* Reverse Voltage - Volts

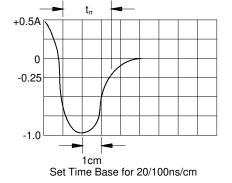




Peak Forward Surge Current - Amperesversus Number Of Cycles At 60Hz - Cycles

Figure 5 Reverse Recovery Time Characteristic And Test Circuit Diagram





- 1. Rise Time = 7ns max.
- Input impedance = 1 megohm, 22pF
- 2. Rise Time = 10ns max.
- Source impedance = 50 ohms
- 3. Resistors are non-inductive



### **Ordering Information:**

Device	Packing
Part Number-TP	Tape&Reel: 4Kpcs/Reel
Part Number-BP	Bulk: 25 Kpcs/Carton

Note: Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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