



Micro Commercial Components

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

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

Features

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Low Forward Voltage Drop and High Current Capability
- Fast Switching Speed For High Efficiency

**FR301
 THRU
 FR307**

**3 Amp Fast Recovery
 Rectifier
 50 to 1000 Volts**

Maximum Ratings

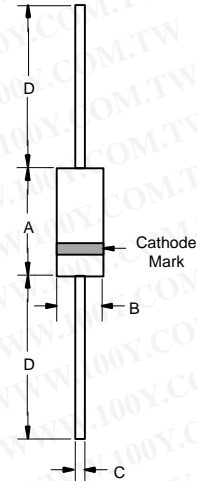
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR301	FR301	50V	35V	50V
FR302	FR302	100V	70V	100V
FR303	FR303	200V	140V	200V
FR304	FR304	400V	280V	400V
FR305	FR305	600V	420V	600V
FR306	FR306	800V	560V	800V
FR307	FR307	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

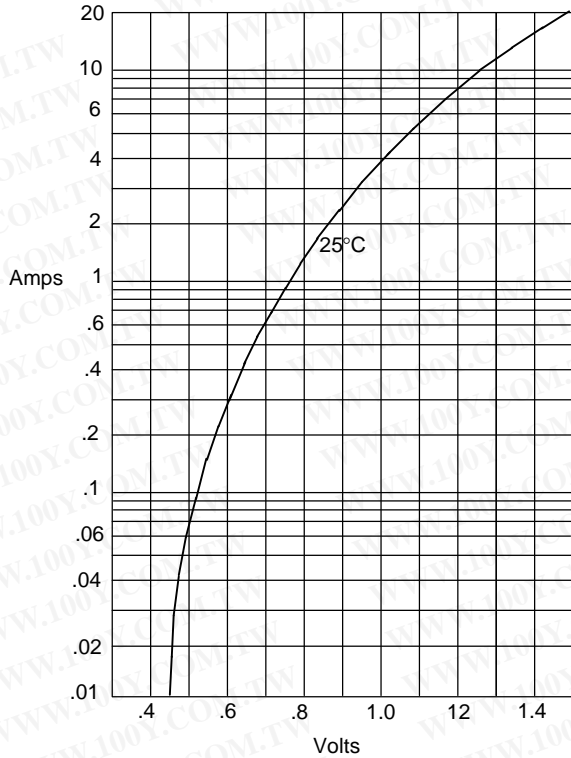
Average Forward Current	$I_{F(AV)}$	3 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 3.0\text{A};$ $T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10 μA 150 μA	$T_A = 25^\circ\text{C}$ $T_A = 55^\circ\text{C}$
Maximum Reverse Recovery Time FR301-304 FR305 FR306-307	T_{rr}	150ns 250ns 500ns	$I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{rr}=0.25\text{A}$
Typical Junction Capacitance	C_J	65pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

DO-201AD



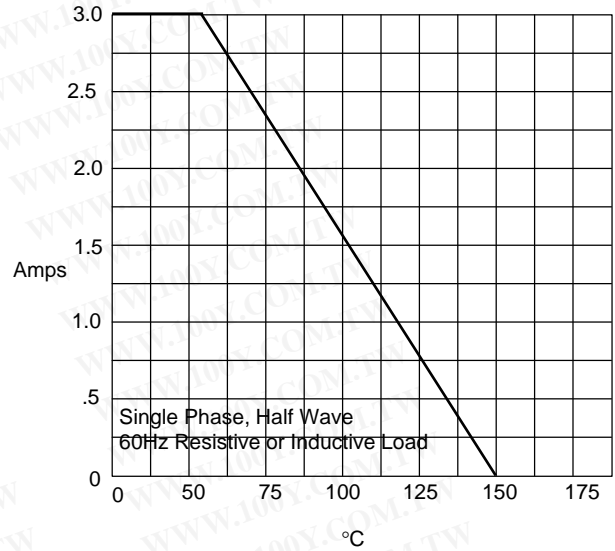
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.287	.374	7.30	9.50	
B	.189	.208	4.80	5.30	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
 Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus
 Instantaneous Forward Voltage - Volts

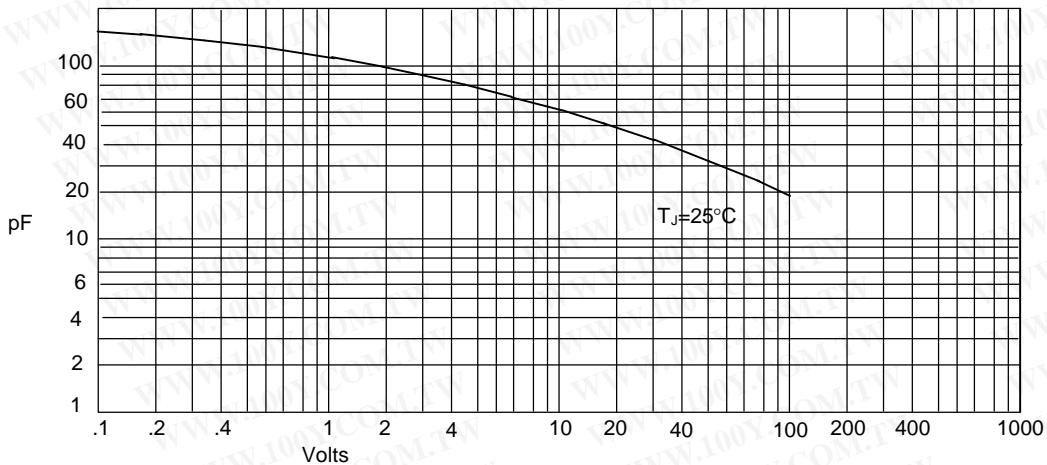
Figure 2
 Forward Derating Curve



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

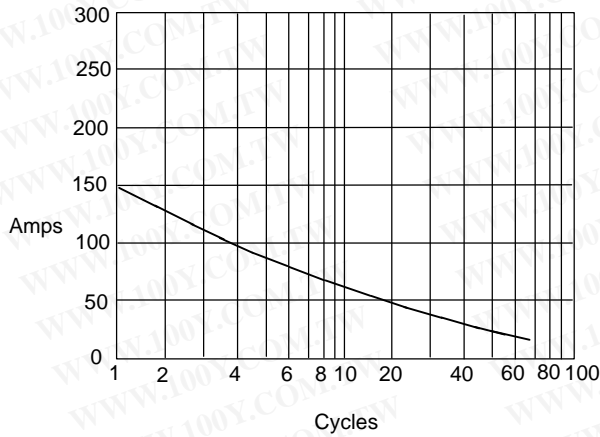
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Figure 3
 Junction Capacitance



Junction Capacitance - pF versus
 Reverse Voltage - Volts

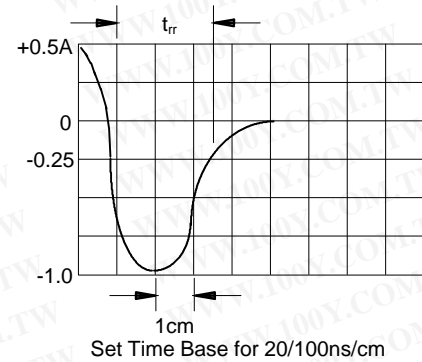
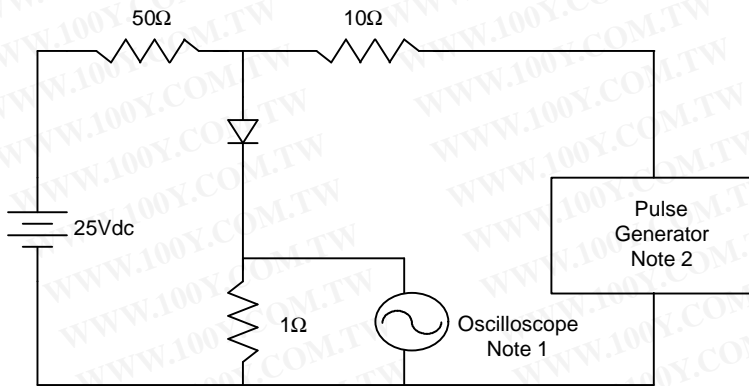
Figure 4
Peak Forward Surge Current



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

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Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:

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



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Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel; 1.2Kpcs/Reel
(Part Number)-AP	Ammo Packing;1.2Kpcs/AmmoBox
(Part Number)-BP	Bulk;500pcs/Box

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