



Micro Commercial Components



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**1N4942  
THRU  
1N4948**

### Features

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

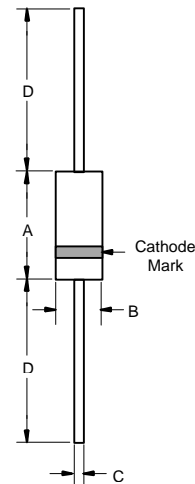
**1 Amp Fast Recovery  
Rectifier  
200 to 1000 Volts**

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 50°C/W Junction To Ambient

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N4942	1N4942	200V	140V	200V
1N4944	1N4944	400V	280V	400V
1N4946	1N4946	600V	420V	600V
1N4947	1N4947	800V	560V	800V
1N4948	1N4948	1000V	700V	1000V

DO-41



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

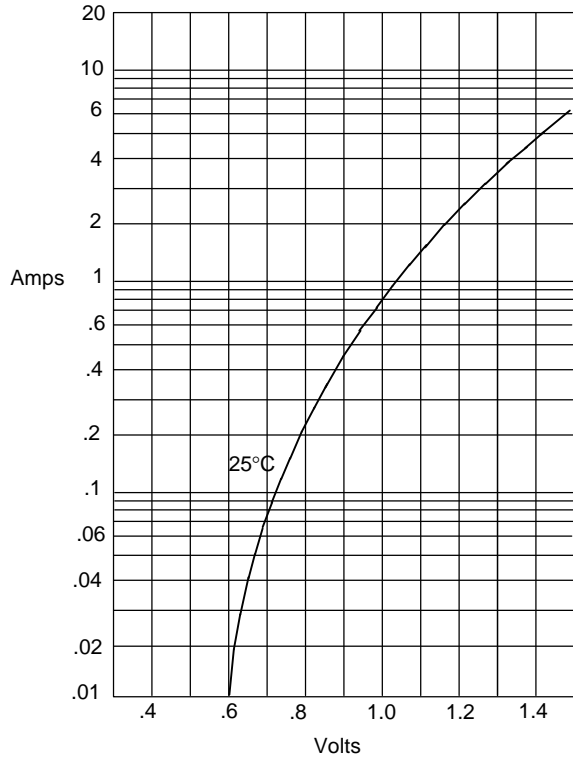
Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	25A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.3V	$I_{FM} = 1.0\text{A}; T_A = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0µA 500µA	$T_J = 25^\circ\text{C}$ $T_J = 175^\circ\text{C}$
Maximum Reverse Recovery Time	$T_{rr}$	150ns 250ns 500ns	$I_F = 0.5\text{A},$ $I_R = 1.0\text{A},$ $I_{rr} = 0.25\text{A}$
1N4942-4944			
1N4946-4947 1N4948			
Typical Junction Capacitance	$C_J$	15pF	Measured at 1.0MHz, $V_R = 4.0\text{V}$

DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

\*Pulse test: Pulse width 300 µsec, Duty cycle 2%

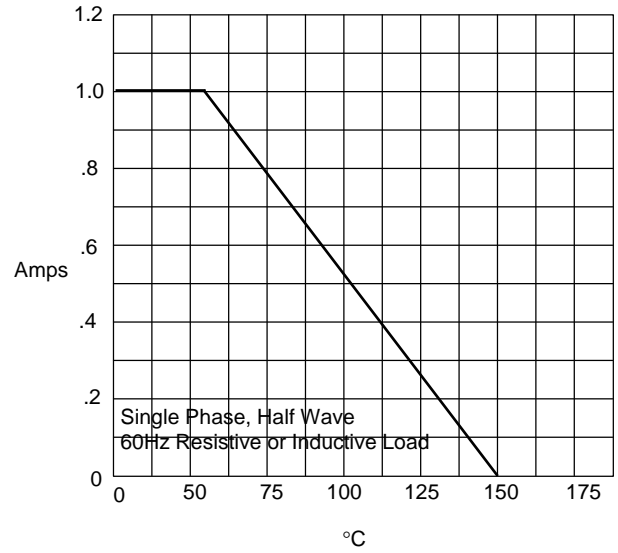
Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

Figure 1  
Typical Forward Characteristics



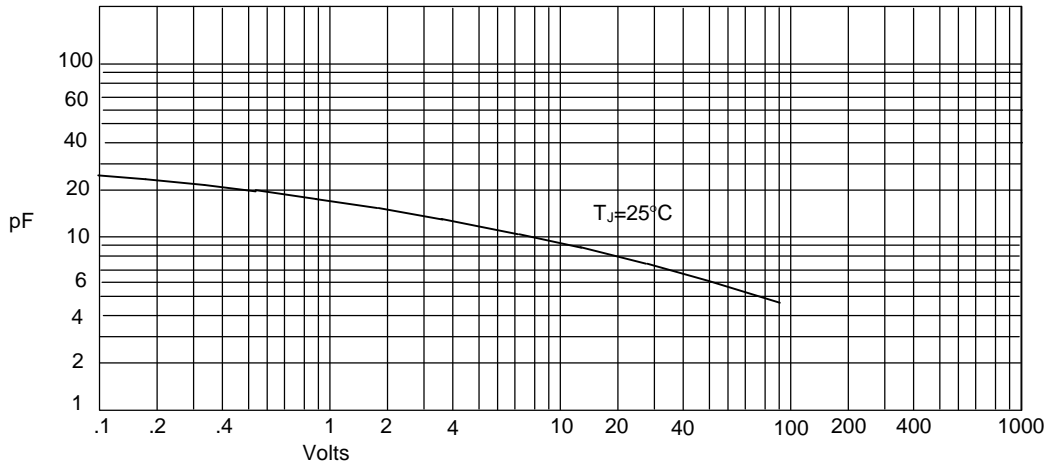
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



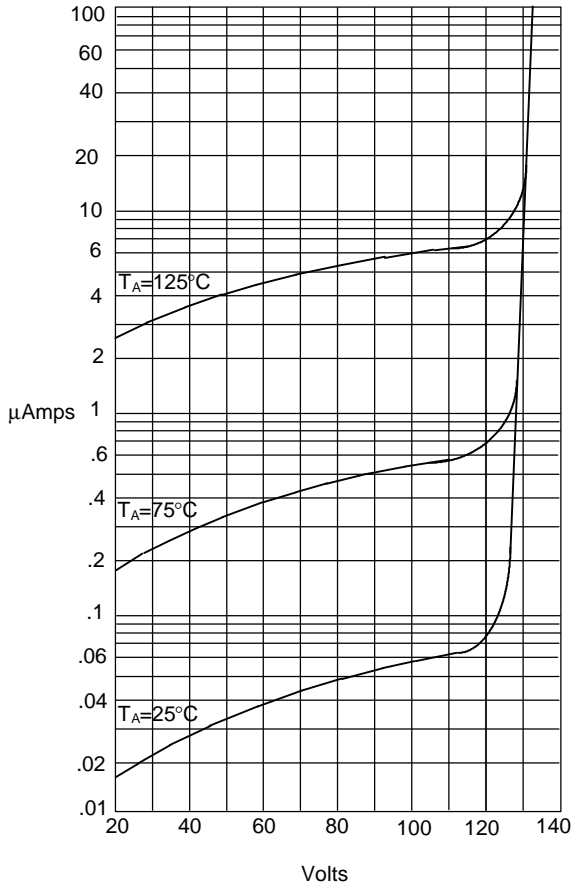
Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



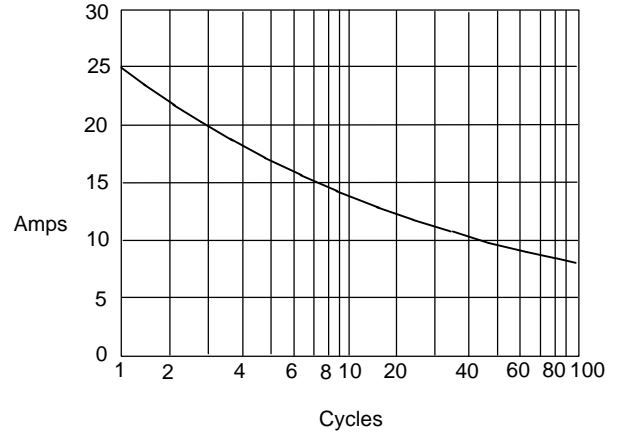
Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

Figure 4  
Typical Reverse Characteristics



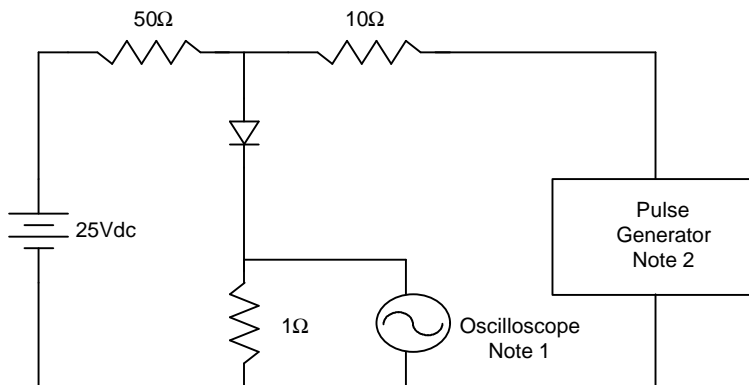
Instantaneous Reverse Leakage Current - MicroAmpere versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Non-Repetitive Peak Forward Surge Current

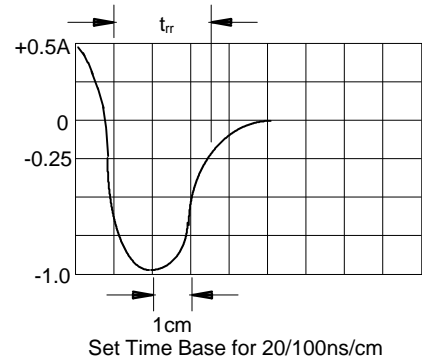


Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles

Figure 6  
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: 5Kpcs/Reel
Part Number-AP	Ammo Packing: 5Kpcs/Ammo Box
Part Number-BP	Bulk: 50Kpcs/Carton

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

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