



Micro Commercial Components



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# MUR105 THRU MUR1100

## 1 Amp Super Fast Recovery Rectifier 50 to 1000 Volts

### Features

- Super Fast Switching Speed For High Efficiency
- Marking:TypeNumber
- 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)

### Maximum Ratings

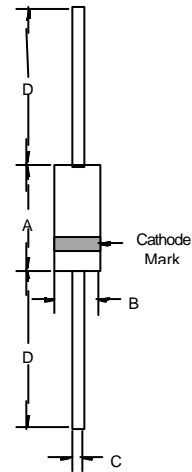
- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MUR105	50V	35V	50V
MUR110	100V	70V	100V
MUR115	150V	105V	150V
MUR120	200V	140V	200V
MUR140	400V	280V	400V
MUR160	600V	420V	600V
MUR180	800V	560V	800V
MUR1100	1000V	700V	1000V

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

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	35A	8.3ms, half sine
Maximum Instantaneous Forward Voltage MUR105-115 MUR120-160 MUR180-1100	$V_F$	.975V 1.35V 1.75V	$I_{FM} = 1.0A;$ $T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5 $\mu$ A 50 $\mu$ A	$T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$
Maximum Reverse Recovery Time MUR105-120 MUR140-160 MUR180-1100	$T_{rr}$	45ns 60ns 75ns	$I_F=0.5A, I_R=1.0A,$ $I_T=0.25A$
Typical Junction Capacitance	$C_J$	20pF	Measured at 1.0MHz, $V_R=4.0V$

### DO-41



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	---	

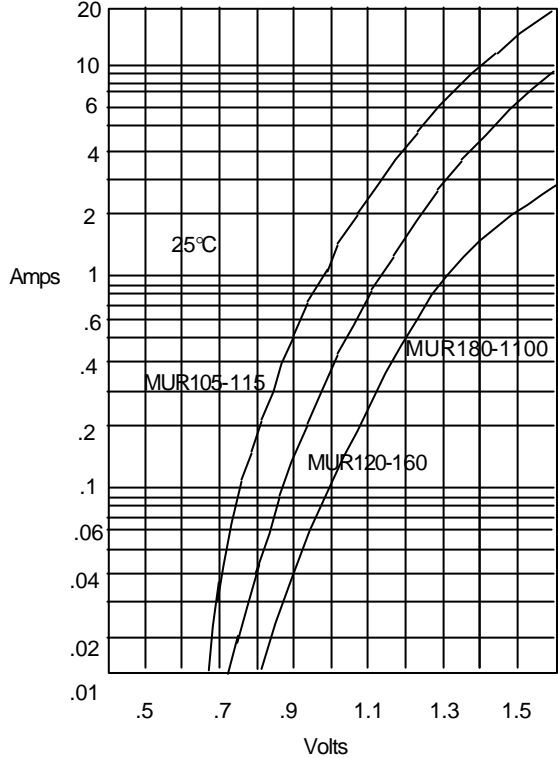
Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

# MUR105 thru MUR1100



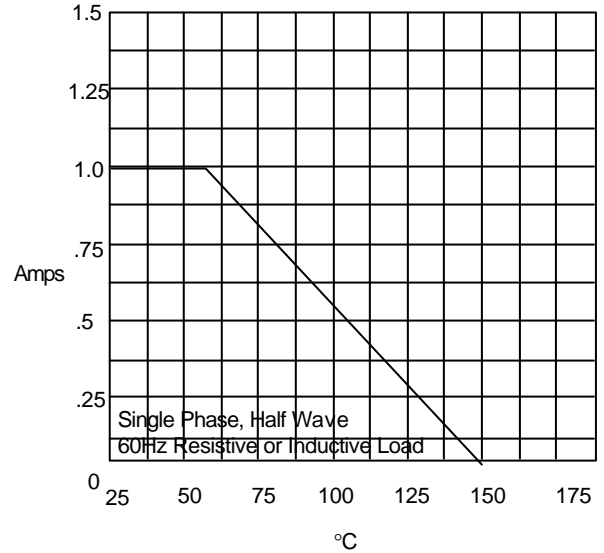
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Figure 1  
Typical Forward Characteristics



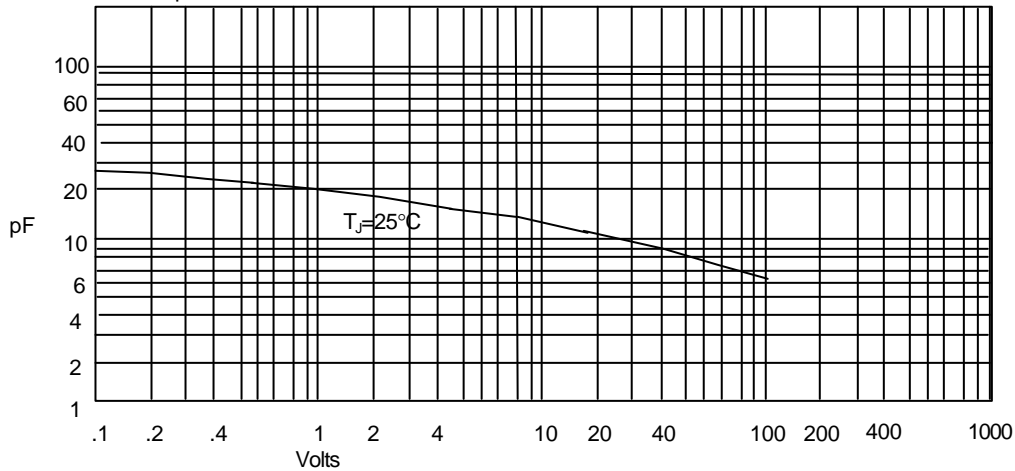
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



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

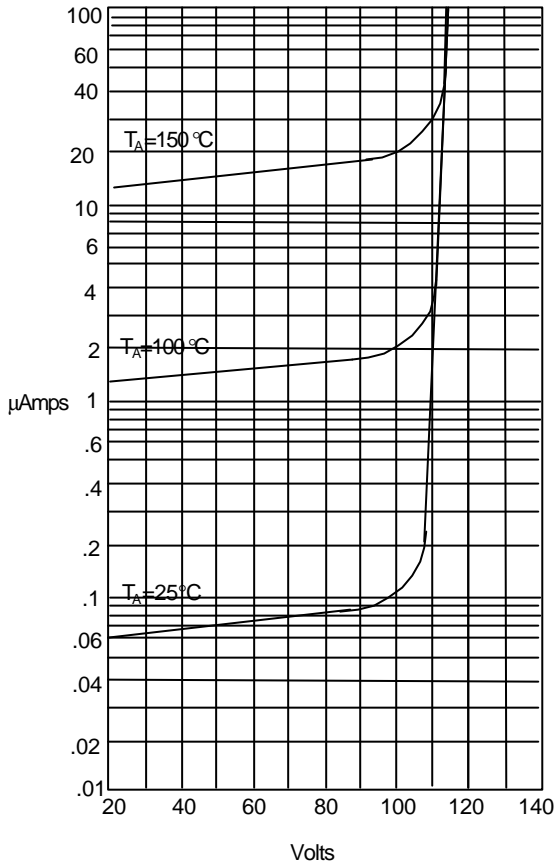
Figure 3  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts

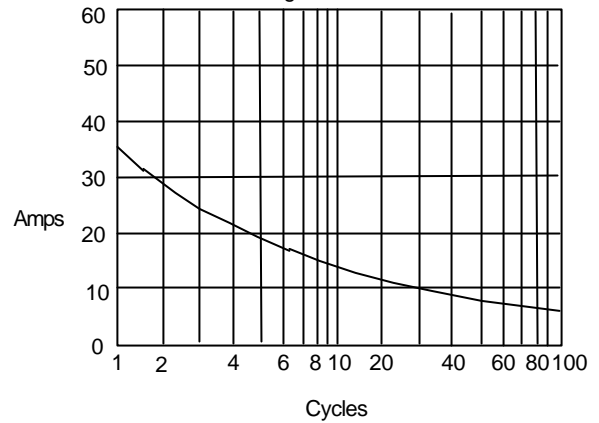
# MUR105 thru MUR110

Figure 4  
Typical Reverse Characteristics



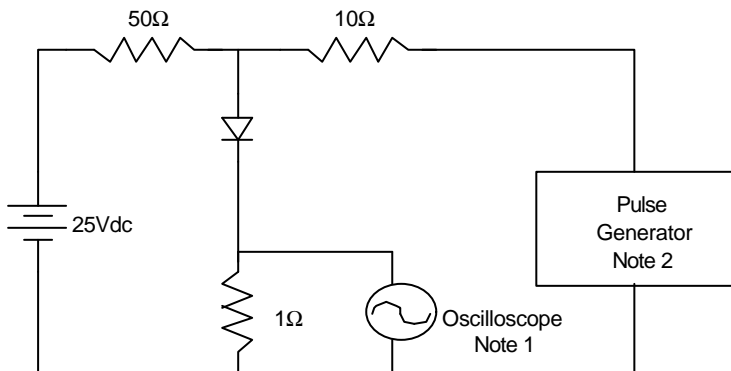
Instantaneous Reverse Leakage Current - MicroAmperes versus

Figure 5  
Peak Forward Surge Current



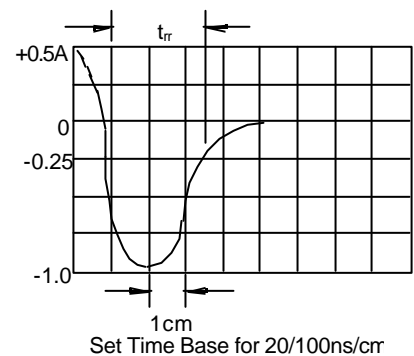
Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

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



Set Time Base for 20/100ns/crr



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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

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