NOT RECOMMENDED FOR NEW DESIGNS
USE ER1A-LTP~ER1J-LTP SERIES

Micro Commercial Components

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ER1A THRU ER1M

1 Amp Ultra Fast Recovery Silicon Rectifier 50 to 1000 Volts

Features

- Easy Pick And Place
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Ultrafast Recovery Times For High Efficiency
- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Temperature(Tj): -50°C to +150°C
- Storage Temperature(Tstg): -50°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
ER1A	ER1A	50V	35V	50V
ER1B	ER1B	100V	70V	100V
ER1C	ER1C	150V	105V	150V
ER1D	ER1D	200V	140V	200V
ER1G	ER1G	400V	280V	400V
ER1J	ER1J	600V	420V	600V
ER1K	ER1K	800V	560V	800V
ER1M	ER1M	1000V	700V	1000V

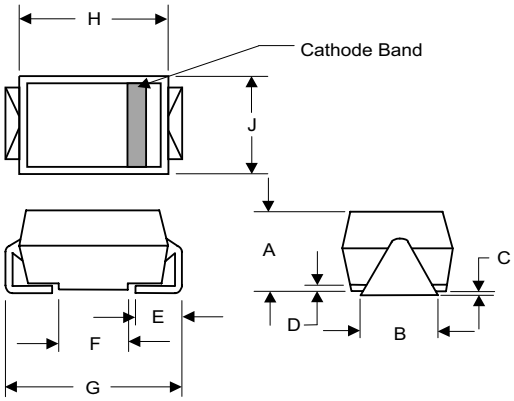
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_J = 75°C
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage ER1A-D ER1G-J ER1K-M	V_F	.975V 1.35V 1.70V	I_{FM} = 1.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5μA 100μA	T_J = 25°C T_J = 100°C
Maximum Reverse Recovery Time ER1A-D ER1G-K ER1M	T_{rr}	50ns 75ns 100ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	45pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 200usec,Duty cycle 2%

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

DO-214AA
(HSMB) (Round Lead)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.078	.116	1.98	2.95	
B	.075	.089	1.90	2.25	
C	.002	.008	.05	.20	
D	-----	.02	-----	.51	
E	.035	.055	.90	1.40	
F	.065	.091	1.65	2.32	
G	.205	.224	5.21	5.69	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

SUGGESTED SOLDER PAD LAYOUT

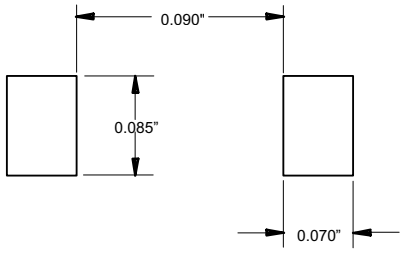
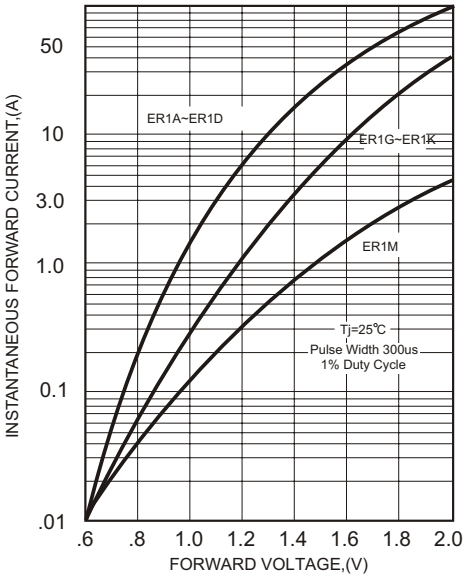
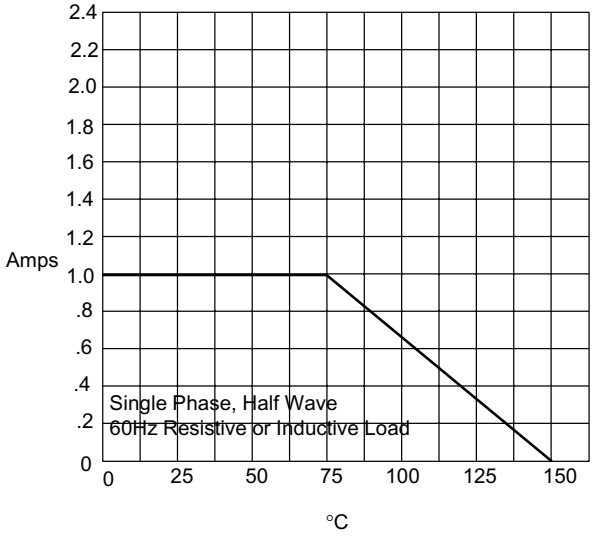


Figure 1
Typical Forward Characteristics



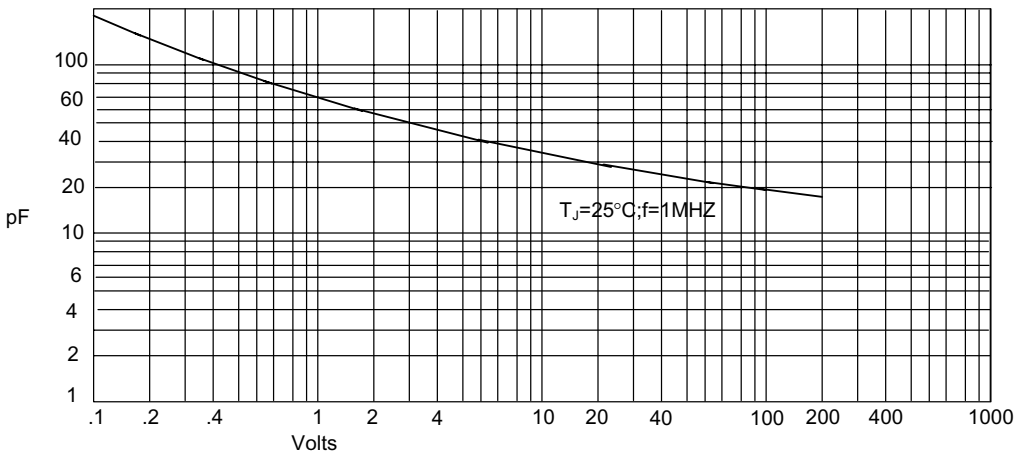
Instantaneous Forward Current - Amperes*versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



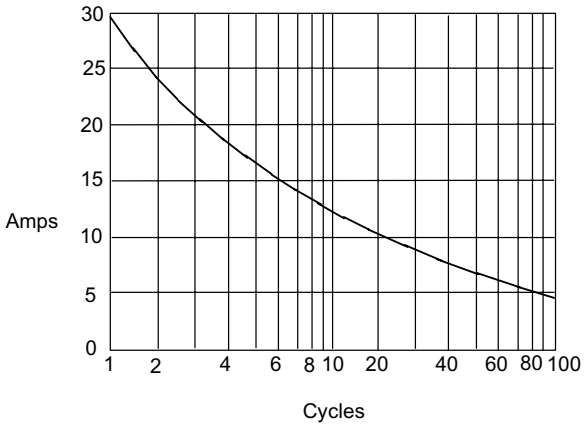
Average Forward Rectified Current - Amperes*versus*
Ambient Temperature -°C

Figure 3
Junction Capacitance



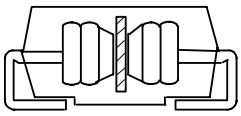
Junction Capacitance - pF*versus*
Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



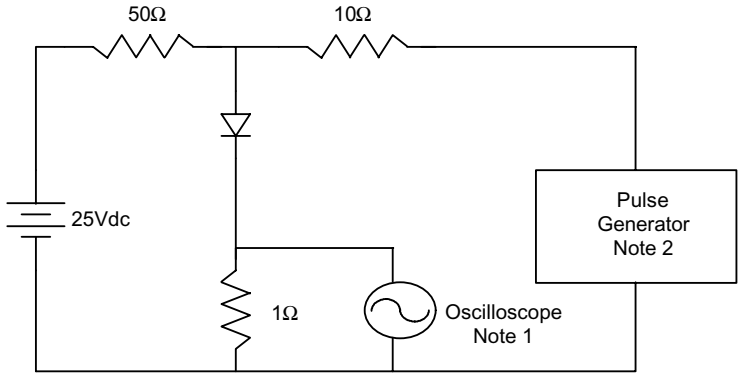
Peak Forward Surge Current - Amperes*versus*
Number Of Cycles At 60Hz - Cycles

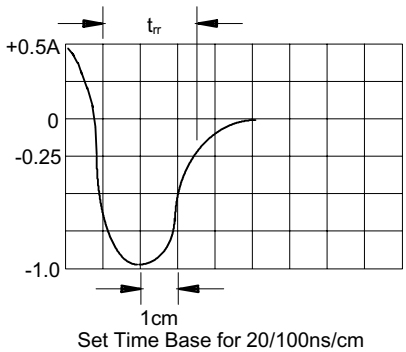
Figure 5
New SMB Assembly



Round Lead
Process

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

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: 3Kpcs/Reel

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

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