



Micro Commercial Components

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**Features**

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- High Surge Capability
- Super Fast Switching Speed For High Efficiency
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1
- Marking : Cathode band and type number

**Maximum Ratings**

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

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
ER10A	50V	35V	50V
ER10B	100V	70V	100V
ER10D	200V	140V	200V
ER10G	400V	280V	400V

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

Average Forward Current	$I_{F(AV)}$	10 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	200A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.2V	$I_{FM} = 10.0\text{A}; T_A = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10.0µA	$T_A = 25^\circ\text{C}$
Maximum Reverse Recovery Time ER10A-ER10D ER10G	$T_{rr}$	35ns 60ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$

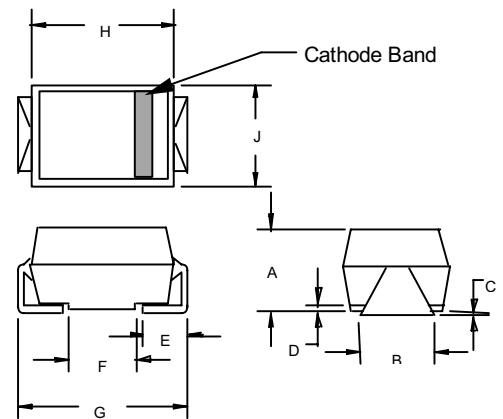
\*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

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

**ER10A  
THRU  
ER10G**

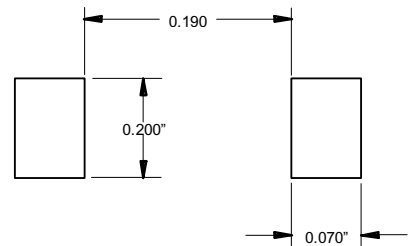
**10 Amp  
Super Fast Recovery  
Rectifier  
50 to 400 Volts**

**DO-214AB  
(HSMC) (Round Lead)**



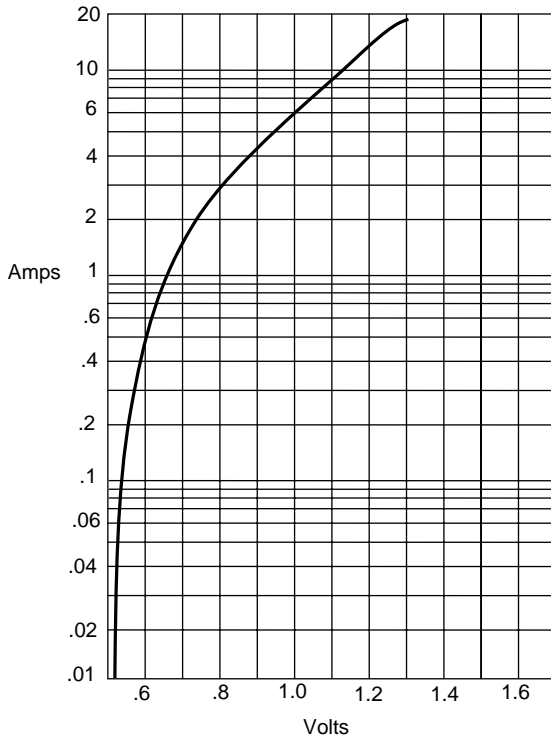
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.200	.214	5.08	5.43	
B	.177	.203	4.70	5.30	
C	.002	.005	.05	.13	
D	—	.02	—	.51	
E	.047	.056	1.20	1.42	
F	.168	.179	4.27	4.55	
G	.309	.322	7.85	8.18	
H	.239	.243	6.08	6.18	
J	.234	.240	5.95	6.10	

**SUGGESTED SOLDER  
PAD LAYOUT**



# ER10A thru ER10G

Figure 1  
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve

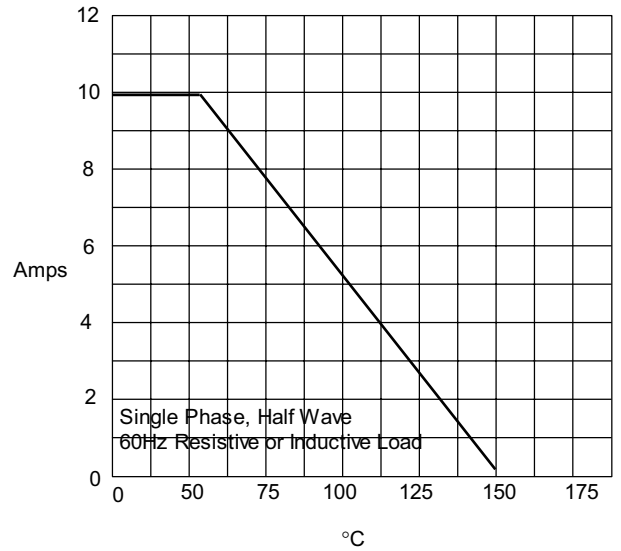
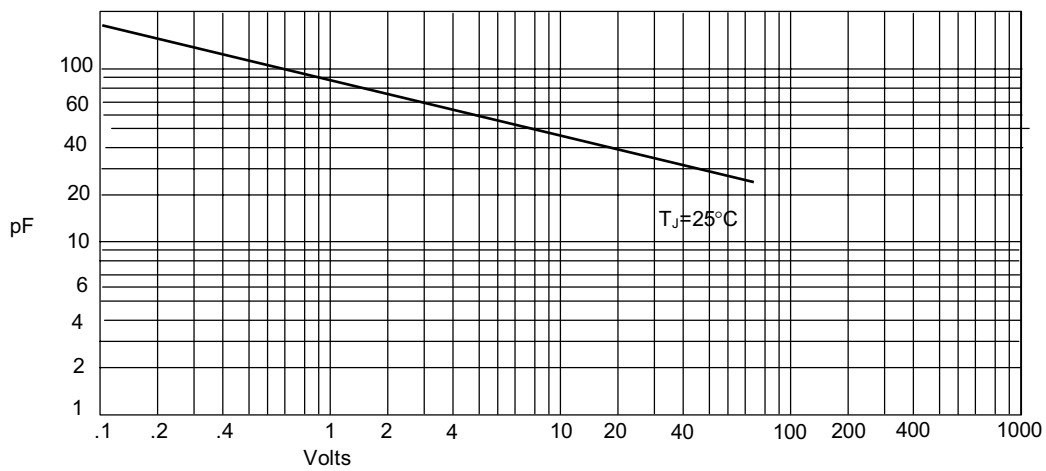
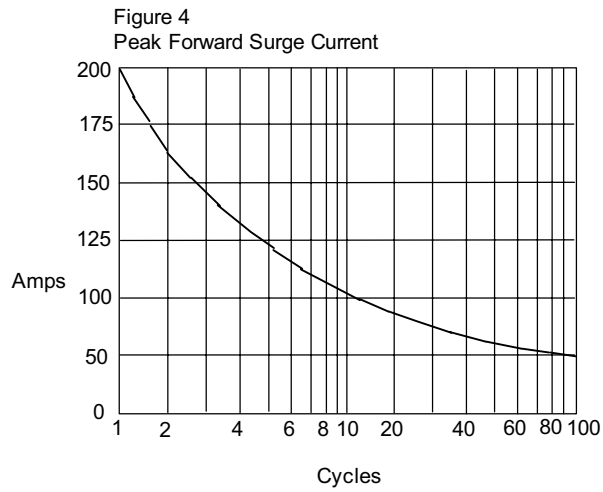


Figure 3  
Junction Capacitance



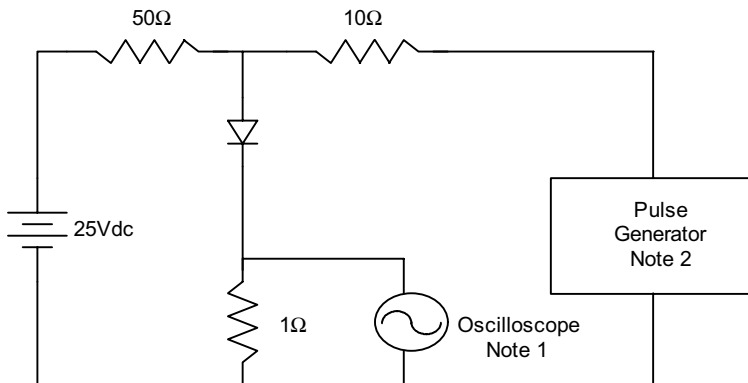
Junction Capacitance - pF versus  
Reverse Voltage - Volts

# ER10A thru ER10G

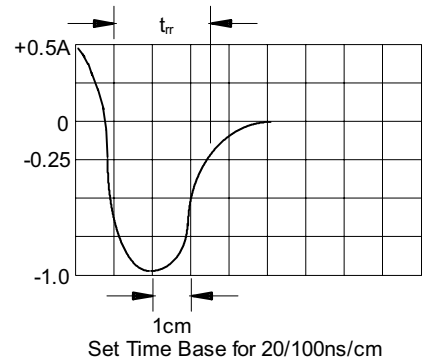


Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

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;1.5Kpcs/Reel

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