

## SUPER FAST RECTIFIERS

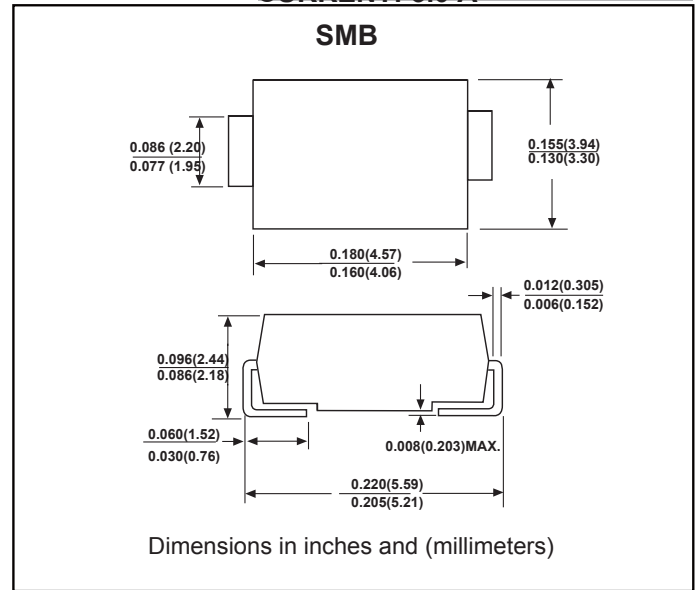
### Features

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

### MECHANICAL DATA

- Case: SMB molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

VOLTAGE RANGE: 50--- 1000 V  
CURRENT: 3.0 A



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted) Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate by 20%.

Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
ER3AB	ER3AB	50V	35V	50V
ER3BB	ER3BB	100V	70V	100V
ER3CB	ER3CB	150V	105V	150V
ER3DB	ER3DB	200V	140V	200V
ER3GB	ER3GB	400V	280V	400V
ER3JB	ER3JB	600V	420V	600V
ER3KB	ER3KB	800V	560V	800V
ER3MB	ER3MB	1000V	700V	1000V

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Typical Thermal Resistance; 16°C/W Junction To Lead

Average Forward Current	IF(AV)	3.0A	TA = 75°C
Peak Forward Surge Current	IFSM	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage ER3AB~3DB ER3GB ER3JB~3MB	VF	.95V 1.25V 1.70V	IFM = 3.0A; TJ = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	IR	5μA 200μA	TJ = 25°C TJ = 100°C
Maximum Reverse Recovery Time ER3AB~ER3JB ER3KB~ER3MB	Trr	35ns 75ns	IF=0.5A, IR=1.0A, Irr=0.25A
Typical Junction Capacitance	CJ	45pF	Measured at 1.0MHz, VR=4.0V

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

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

# RATINGS AND CHARACTERISTIC CURVES

Figure 1  
Typical Forward Characteristics

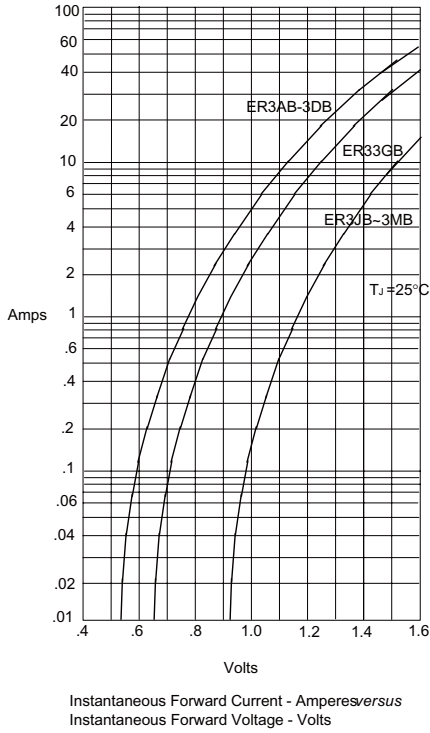


Figure 2  
Forward Derating Curve

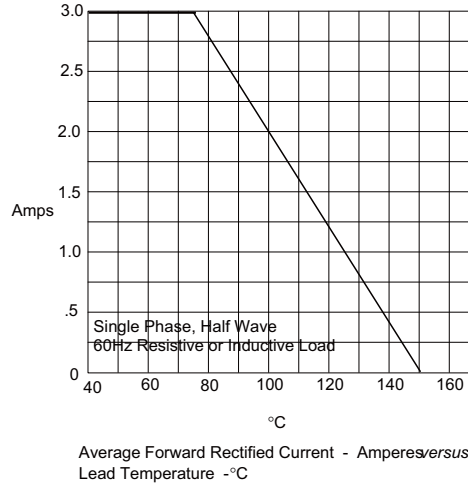


Figure 5  
Peak Forward Surge Current

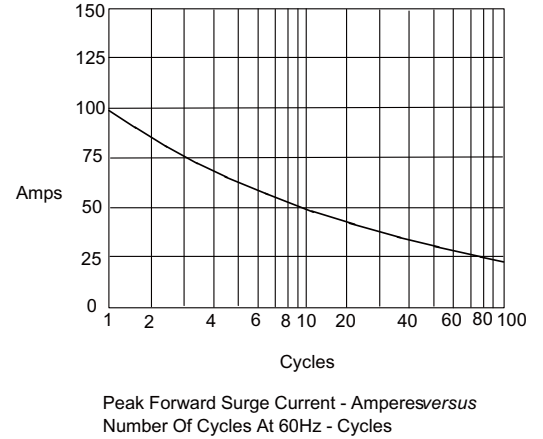


Figure 3  
Typical Junction Capacitance

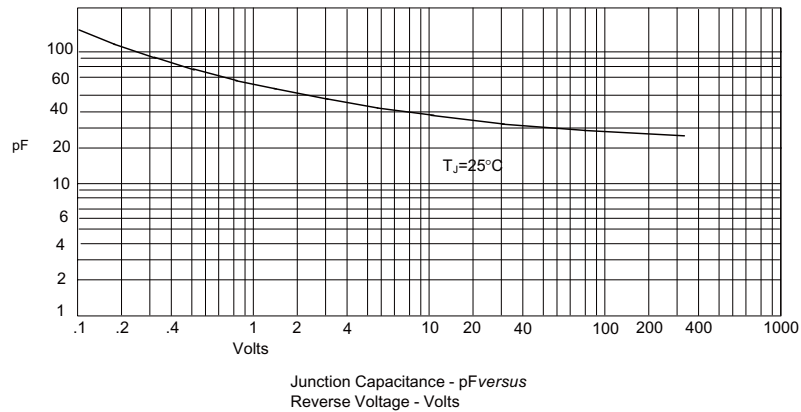


Figure 4  
Typical Reverse Characteristics

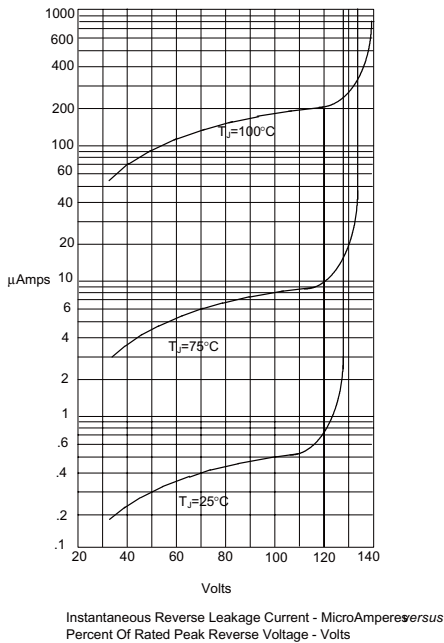
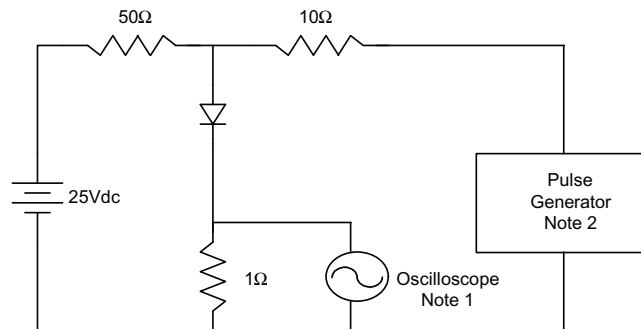


Figure 6  
Reverse Recovery Time Characteristic And Test Circuit Diagram



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

