

### SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts    Forward Current - 1.0 Ampere

#### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Super fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 seconds at terminals
- Glass passivated chip junction

#### Mechanical Data

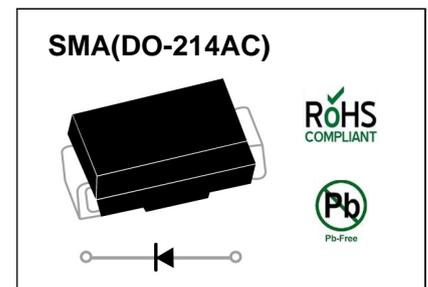
- Case: DO-214AC molded plastic body over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.002 ounce, 0.07 grams

#### Specification

##### Maximum Rating And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.



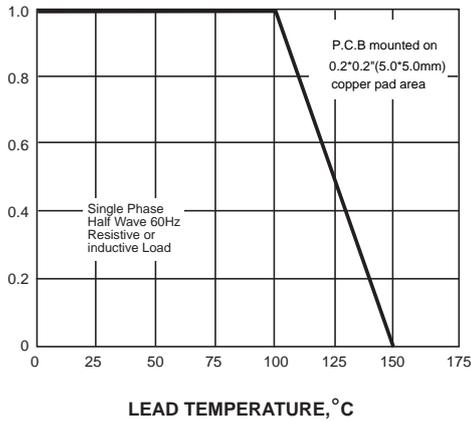
	SYMBOLS	ER1A	ER1B	ER1C	ER1D	ER1E	ER1G	ER1J	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	V	
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	V	
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	V	
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{AV}$	1.0							A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30.0							A	
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.95			1.25		1.7		V	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0					50.0			$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	35					ns			
Typical junction capacitance (NOTE 2)	$C_J$	15.0					pF			
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	75.0					$^\circ\text{C/W}$			
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$	

**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

### Ratings and characteristic curves ER1A thru ER1J

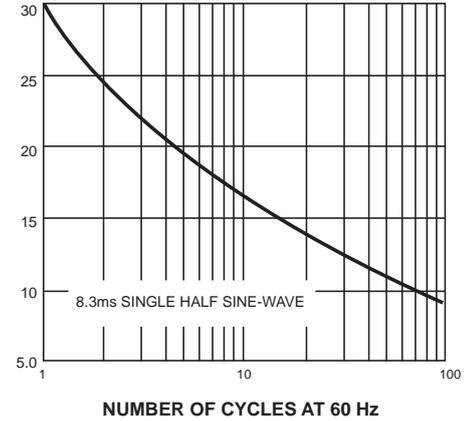
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



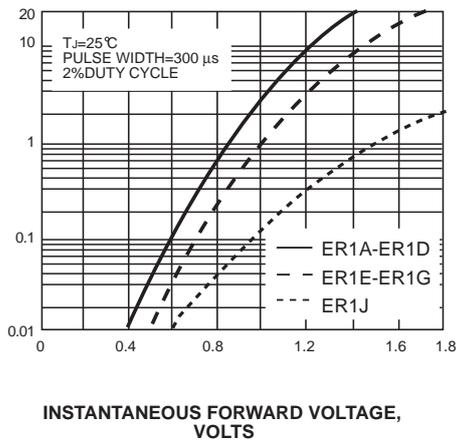
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



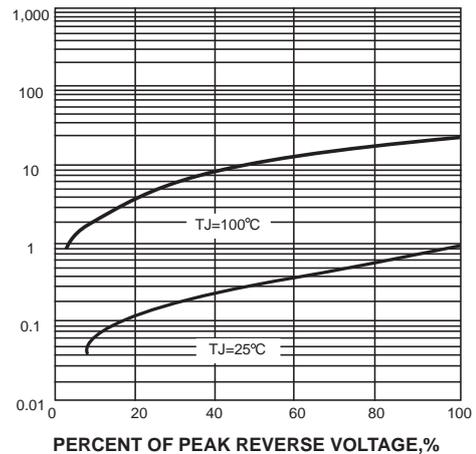
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



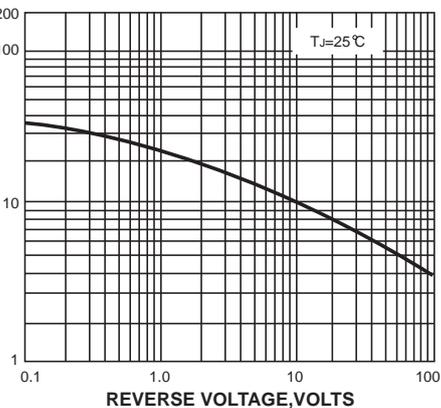
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



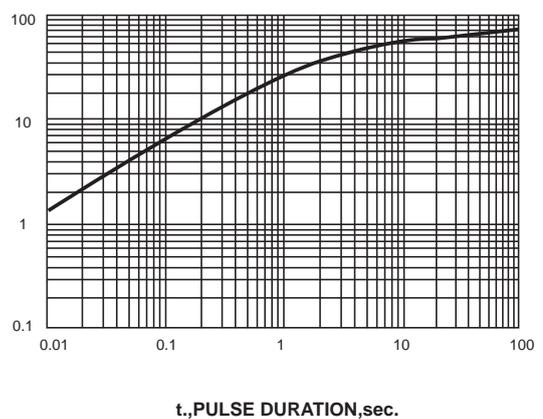
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



### Marking and packing illustration

#### 1、Marking



SYMBOL	Explanation
A	Product Name

#### 2、Packaging

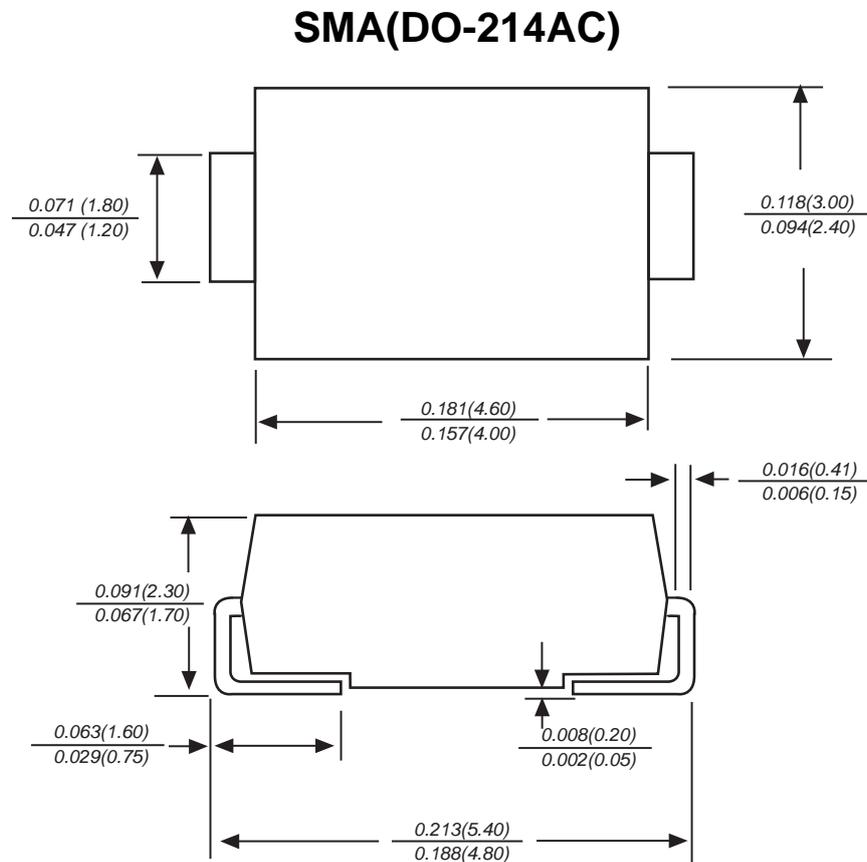


SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	SMA (DO-214AC)	ITEM	SYM BOL	SMA (DO-214AC)
Carrier width	A	3.17(0.125)Max	Carrier depth	K	2.42(0.095)Typ
Carrier length	B	5.81(0.229)Max	Punch hole pitch	P	4.00(0.157)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	178.0(7)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	50.0(1.969)Min	Overall tape thickness	T	0.30(0.012)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	12.0(0.472)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	5.55(0.219)Typ			

#### 3、Ordering Information

Part Number	Compliance	Case	Packaging
SSXX	Standard	SMA	2000/Tape & Reel

### Dimension



*Dimensions in inches and (millimeters)*

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