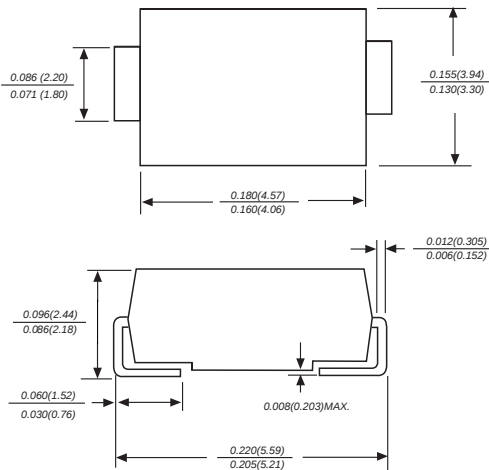


RS3AB THRU RS3MB

SURFACE MOUNT FAST RECOVERY RECTIFIER

DO-214AA/SMB



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Glass passivated chip junction

MECHANICAL DATA

Case: JEDEC DO-214AA 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: 0.005 ounce, 0.138 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

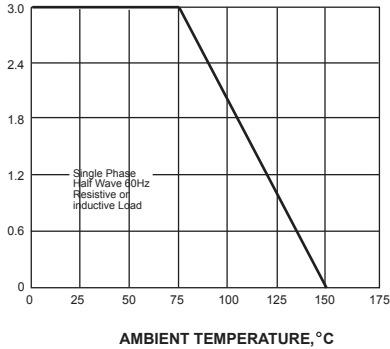
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	RS3AB	RS3BB	RS3DB	RS3GB	RS3JB	RS3KB	RS3MB	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at T _L =75°C	I _(AV)	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100.0							Amps
Maximum instantaneous forward voltage at 3.0A	V _F	1.3							Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 100.0							μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	150				250	500		ns
Typical junction capacitance (NOTE 2)	C _J	60.0							pF
Typical thermal resistance (NOTE 3)	R _{θJA}	50.0							°C/W
Operating junction and storage temperature range	T _J ,T _{STG}	-65 to +150							°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

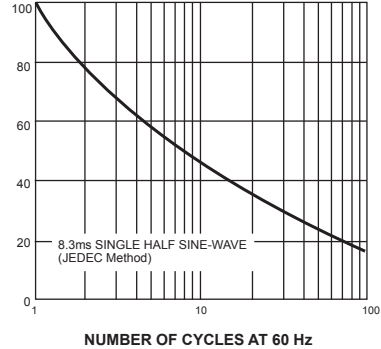
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



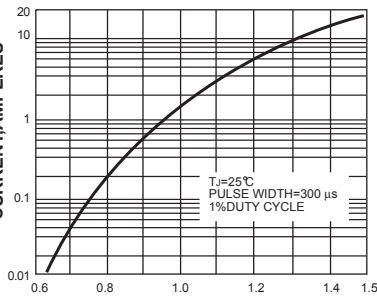
PEAK FORWARD SURGE CURRENT,
AMPERES

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



INSTANTANEOUS FORWARD
CURRENT, AMPERES

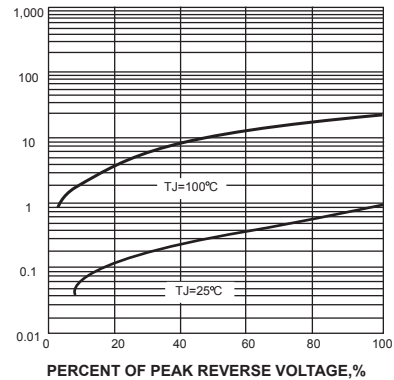
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,
VOLTS

INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

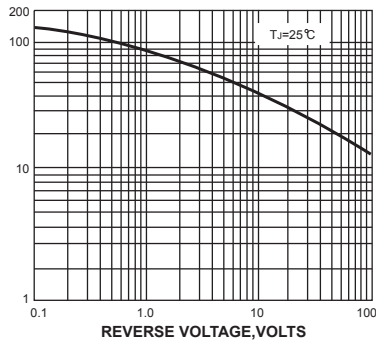
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

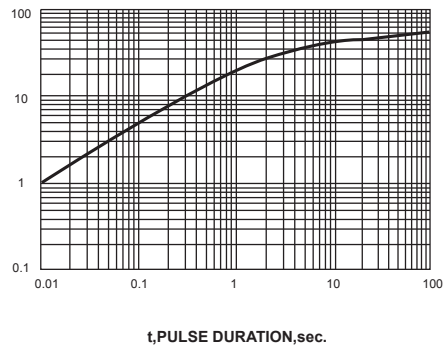
FIG. 5-TYPICAL JUNCTION CAPACITANCE



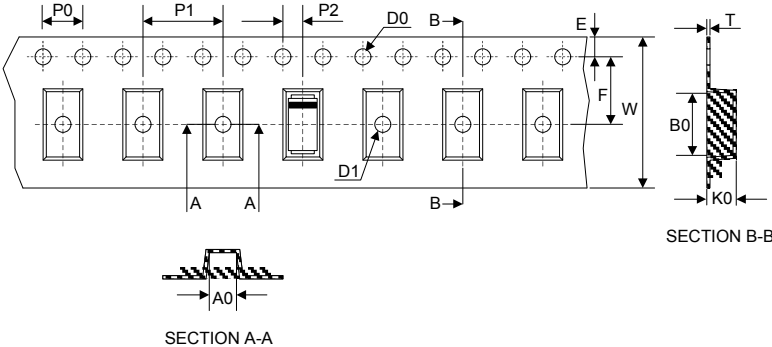
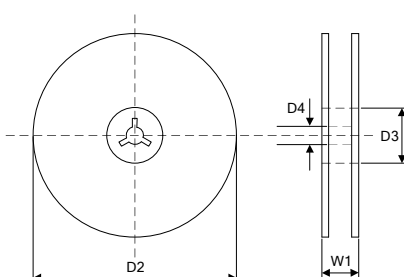
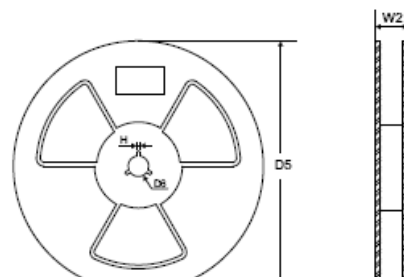
REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Packaging

Tape 	<table> <tr> <th>Symbol</th><th>Dimension (mm)</th></tr> <tr><td>W</td><td>12.00±0.20</td></tr> <tr><td>P0</td><td>4.00±0.10</td></tr> <tr><td>P1</td><td>8.00±0.10</td></tr> <tr><td>P2</td><td>2.00±0.10</td></tr> <tr><td>D0</td><td>Φ1.55±0.10</td></tr> <tr><td>D1</td><td>Φ1.5±0.10</td></tr> <tr><td>E</td><td>1.75±0.10</td></tr> <tr><td>F</td><td>5.50±0.10</td></tr> <tr><td>A0</td><td>3.86±0.15</td></tr> <tr><td>B0</td><td>5.65±0.10</td></tr> <tr><td>K0</td><td>2.75±0.15</td></tr> <tr><td>T</td><td>0.25±0.05</td></tr> </table>	Symbol	Dimension (mm)	W	12.00±0.20	P0	4.00±0.10	P1	8.00±0.10	P2	2.00±0.10	D0	Φ1.55±0.10	D1	Φ1.5±0.10	E	1.75±0.10	F	5.50±0.10	A0	3.86±0.15	B0	5.65±0.10	K0	2.75±0.15	T	0.25±0.05
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K0	2.75±0.15																										
T	0.25±0.05																										
7" Reel 	<table> <tr><td>D2</td><td>Φ178.0±2.0</td></tr> <tr><td>D3</td><td>Φ50.0Min.</td></tr> <tr><td>D4</td><td>Φ13.0±0.5</td></tr> <tr><td>W1</td><td>16.0±2.0</td></tr> <tr><td colspan="2">Quantity: 500PCS</td></tr> </table>	D2	Φ178.0±2.0	D3	Φ50.0Min.	D4	Φ13.0±0.5	W1	16.0±2.0	Quantity: 500PCS																	
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D4	Φ13.0±0.5																										
W1	16.0±2.0																										
Quantity: 500PCS																											
13" Reel 	<table> <tr><td>D5</td><td>Φ330.0±2.0</td></tr> <tr><td>D6</td><td>Φ13.5±0.5</td></tr> <tr><td>H</td><td>2.5±1.0</td></tr> <tr><td>W2</td><td>16.0±2.0</td></tr> <tr><td colspan="2">Quantity: 3000PCS</td></tr> </table>	D5	Φ330.0±2.0	D6	Φ13.5±0.5	H	2.5±1.0	W2	16.0±2.0	Quantity: 3000PCS																	
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