

SURFACE MOUNT FAST RECOVERY RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

Forward Current – 2.0 Ampere

Features

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Fast switching for high efficiency
- AEC-Q101 qualified (Automotive grade with suffix "Q".)



Mechanical Data

- **Case:** SMB molded plastic.
- **Mounting position:** Any
- **Lead:** Lead formed for surface mount
- **Polarity:** Color band denotes cathode end

Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

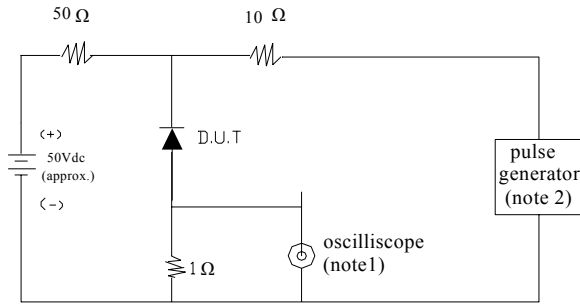
	Symbols	RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward current at $T_a = 90^{\circ}C$	$I_{F(AV)}$	2.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	55							Amps
Maximum peak forward voltage at $I_F = 1A$	V_F	1.3							Volts
Maximum DC reverse current @ $T_A = 25^{\circ}C$	I_R	5							μA
at rated DC blocking voltage @ $T_A = 100^{\circ}C$	$I_{R(H)}$	50							
Maximum reverse recovery time(Note 1)	t_{rr}	150				250	500		ns
Typical junction capacitance (Note 2)	C_J	50							pF
Operating and storage temperature range	T_J, T_S	-65 to +150							$^{\circ}C$

Notes: 1.Reverse recovery test conditions $I_F = 0.5A$, $I_R = 1A$, $I_{rr} = 0.25A$.

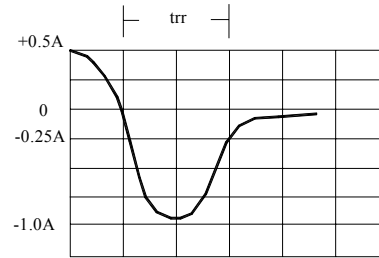
2. Measured at 1 MHz and applied reverse voltage of 4 volts.

RATING AND CHARACTERISTICS CURVES (RS2A THRU RS2M)

TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



Notes: 1. Rise time = 7ns max. Input impedance = 1megaohm. 22pF
 2. Rise time = 10ns max. Source impedance = 50ohms.
 3. All Resistors = Non-inductive Types



set time base for 50-100 ns/cm

FIG.1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

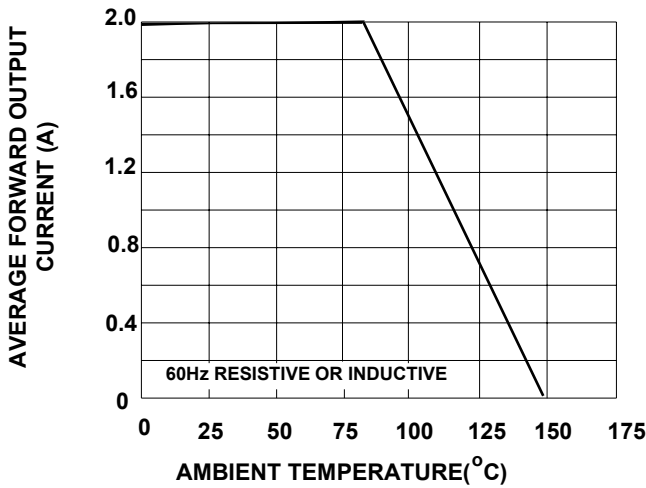


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

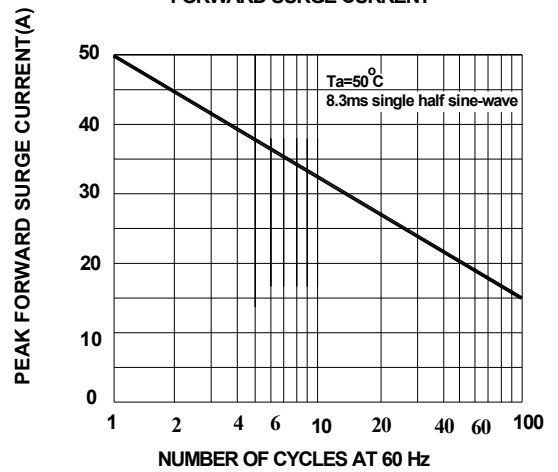


FIG.4-TYPICAL FORWARD CHARACTERISTICS

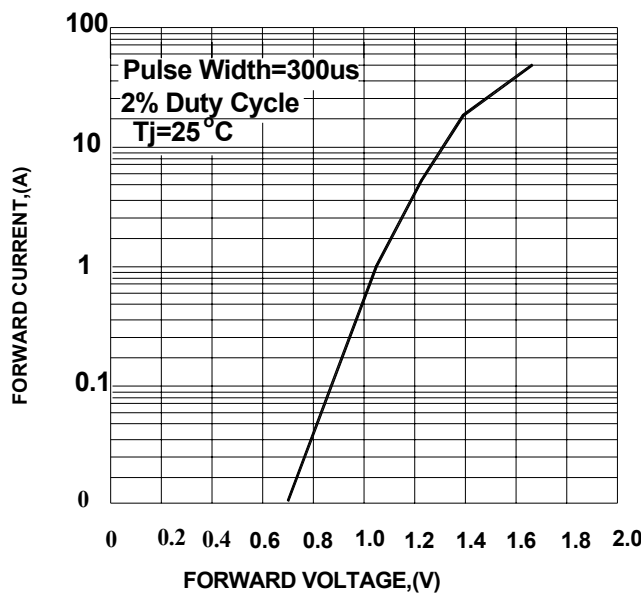
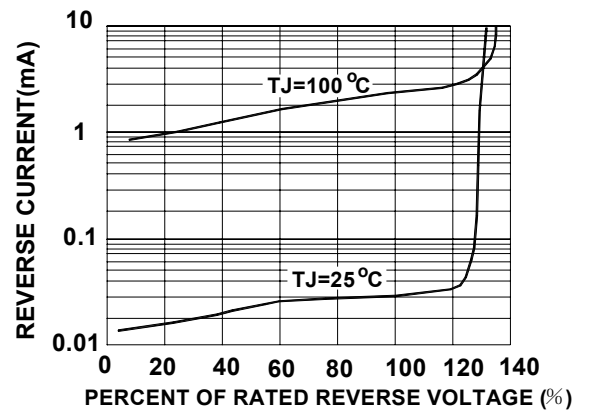
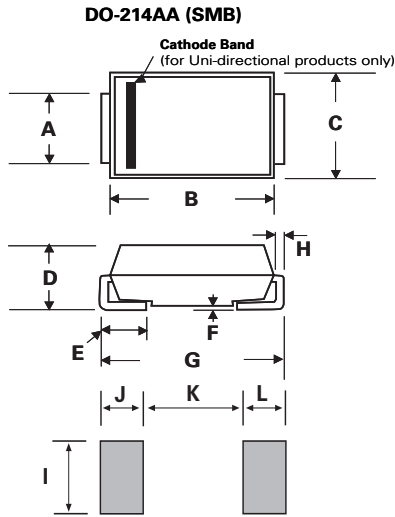


FIG.5-TYPICAL REVERSE CHARACTERISTICS



Dimensions

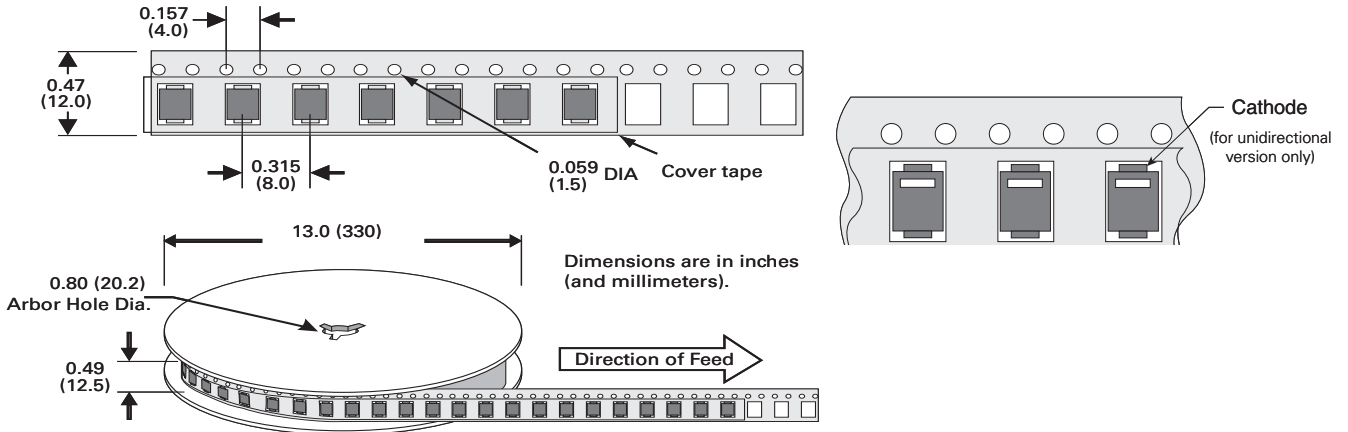


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.066	0.091	1.700	2.300
B	0.160	0.191	4.060	4.850
C	0.130	0.155	3.300	3.940
D	0.083	0.098	2.100	2.500
E	0.030	0.060	0.760	1.520
F	-	0.011	-	0.300
G	0.200	0.220	5.08	5.590
H	0.006	0.012	0.152	0.310
I	0.082	-	2.100	-
J	0.070	-	1.800	-
K	-	0.107	-	2.740
L	0.070	-	1.800	-

Ordering information

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
RS2X	DO-214AA	3000	Tape & Reel - 12mm tape/13" reel	EIA STD RS-481

Tape and Reel Specification



Note: Devices are packed in accordance with EIA standard RS-481-A and specification given above.