Innovative Service Around the Globe YAGEO

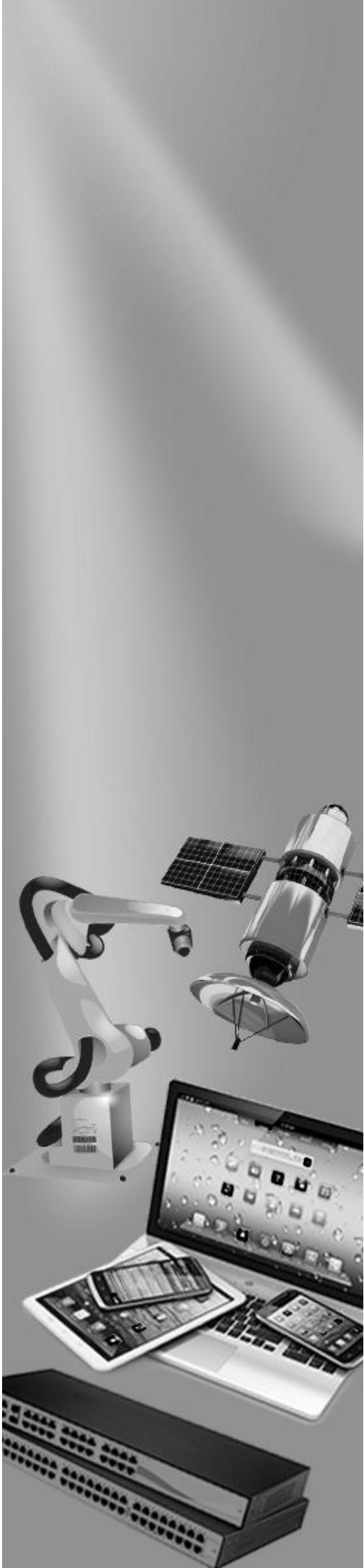
DATA SHEET

FAST RECOVERY RECTIFIER
GENERAL PURPOSE

RS1XF SERIES

RoHS compliant & Halogen free

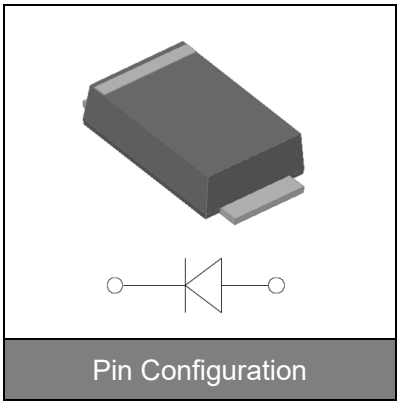
Product specification– August 27, 2026 V.1



Fast Recovery Rectifier Data Sheet

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C



Pin Configuration

Mechanical Data

- Package: SMAF
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals：Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end

Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOLS	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF	UNITS
	Marking	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	-
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RmS}	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average rectified output current @60Hz sine wave, resistance load, TL	IO	1.0							A
Forward Surge Current (Non-repetitive)@60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	30							A
Forward Surge Current (Non-repetitive)@1ms, square wave, 1 cycle, Tj=25℃	I_{FSM}	60							A
Operating Junction and Storage Temperature Range	Tj, Tstg	-55 to +150							℃

Thermal Characteristics （Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF	UNIT
Typical Thermal resistance	$R_{\theta J-A}$ (1)	70							℃/W
	$R_{\theta J-L}$ (1)	20							℃/W
	$R_{\theta J-C}$ (1)	18							℃/W

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.

Electrical Characteristics（Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOLS	CONDITIONS	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF	UNITS
Maximum instantaneous forward voltage	V_F	I_F=1.0A	1.3							V
Maximum DC reverse current at rated DC blocking voltage	I_R	Tj =25℃	5							uA
		Tj =125℃	100							uA
Typical Junction Capacitance	Cj	V_R=4V, f=1MHZ	11				7			pF
Maximum Reverse Recovery Time	Trr	IF=0.5A,IR=1.0A, Irr=0.25A	150				250	500		ns

Typical Characteristics Curves

Figure 1. Forward Current Derating Curve

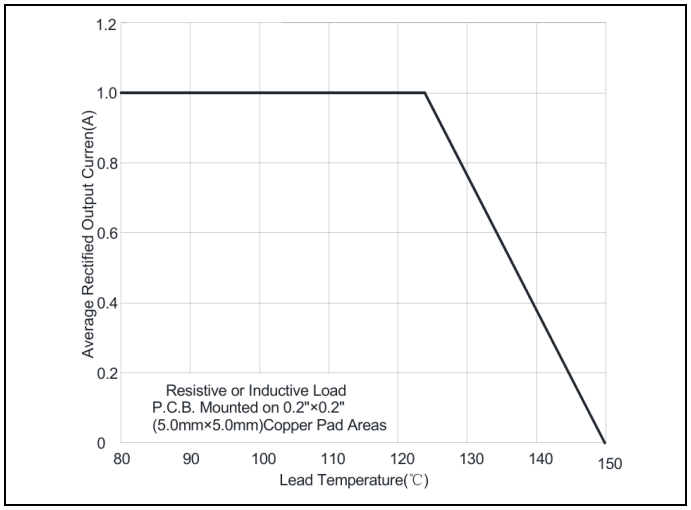


Figure 2. Surge Forward Current Capability

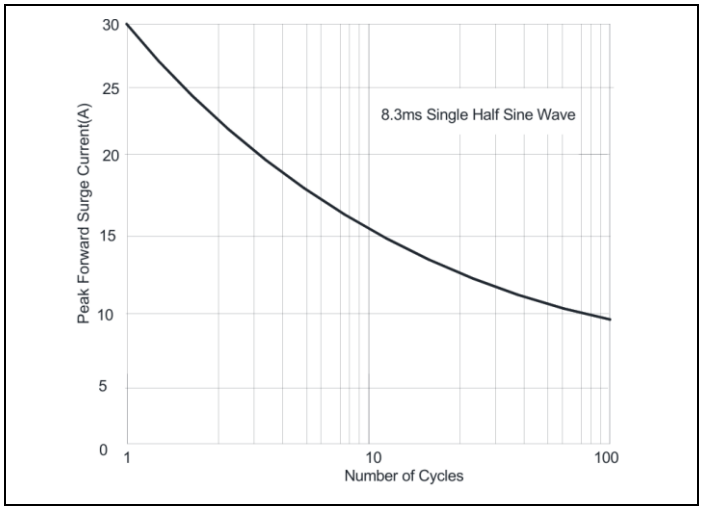


Figure 3. Typical Forward Voltage

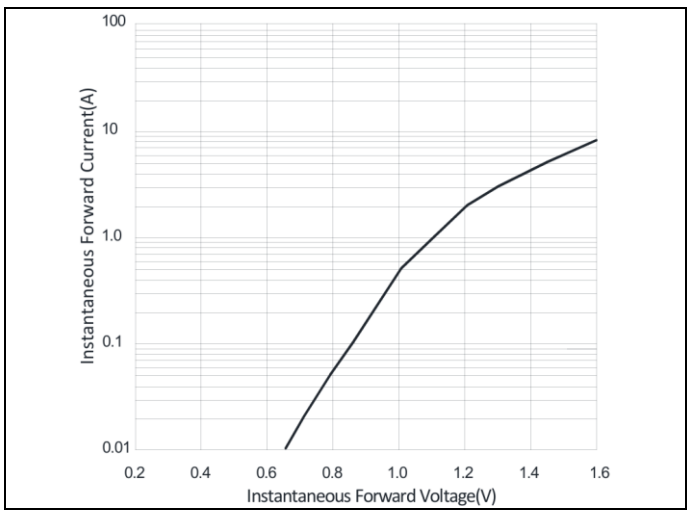
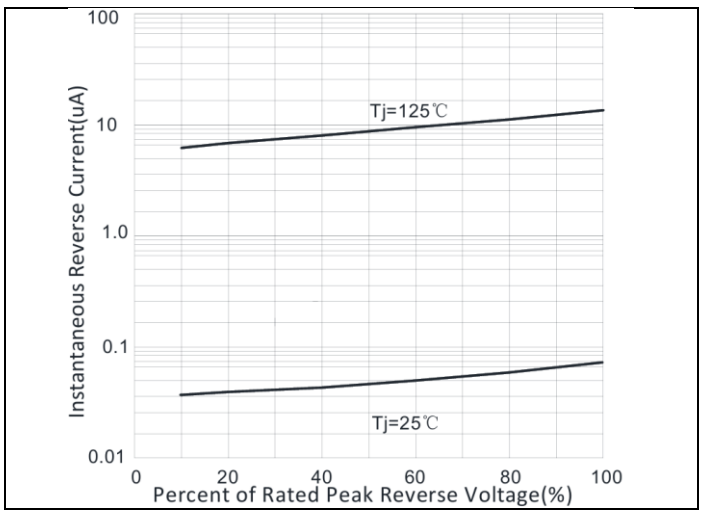
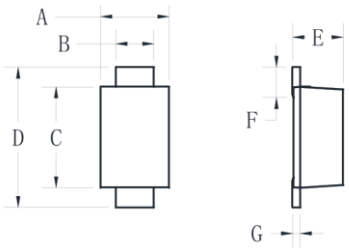


Figure 4. Typical Reverse Characteristics

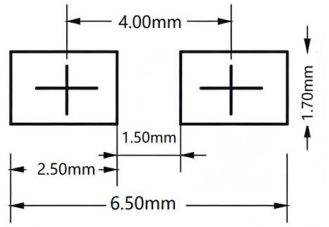


Dimensions (SMAF)

Product:



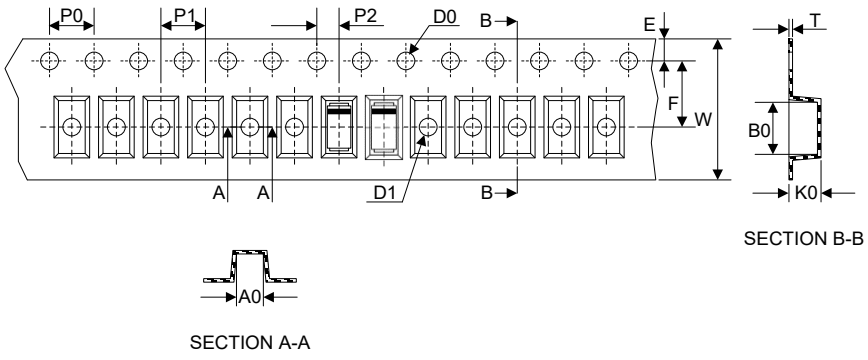
Pad:



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.80	0.095	0.111
B	1.35	1.45	0.053	0.057
C	3.40	3.60	0.134	0.142
D	4.40	4.80	0.174	0.189
E	1.05	1.25	0.042	0.050
F	0.50	1.00	0.020	0.040
G	0.15	0.22	0.006	0.009

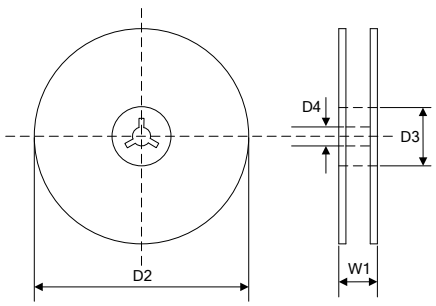
Packaging

Tape



Symbol	Dimension (mm)
W	12.00±0.10
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.05
D0	Φ1.55±0.05
D1	Φ1.55±0.05
E	1.75±0.10
F	5.50±0.05
A0	2.83±0.10
B0	4.75±0.10
K0	1.42±0.05
T	0.25±0.05

7” Reel



D2	Φ178.0±2.0
D3	Φ60.0±2.0
D4	Φ13.5±0.2
W1	Min:17
Quantity: 3000PCS	

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