



RS1A THRU RS1M

DIODE

SURFACE MOUNT FAST RECOVERY RECTIFIER

DESCRIPTION

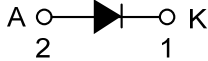
The UTC **RS1A THRU RS1M** is a surface mount fast recovery rectifier, it uses UTC's advanced technology to provide customers with fast switching, high forward surge current and low reverse leakage, etc.

The UTC **RS1A THRU RS1M** is suitable for surface mounted applications.

FEATURES

- * Fast switching for high efficiency
- * Low cost
- * Diffused junction
- * Low reverse leakage current
- * Low forward voltage drop
- * High current capability

SYMBOL

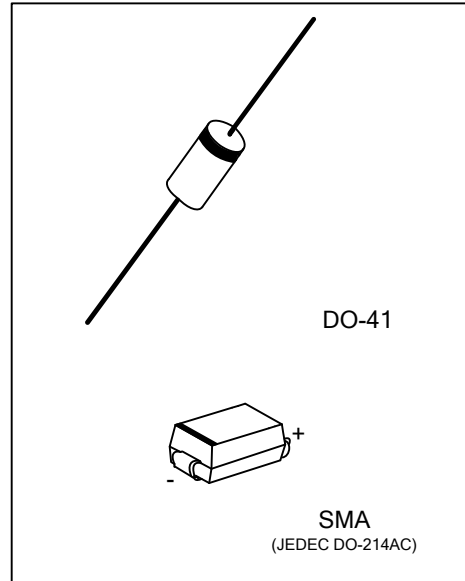


ORDERING INFORMATION

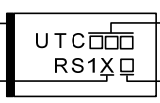
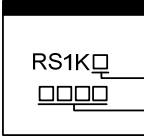
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
RS1AL-SMA-R	RS1AG-SMA-R	SMA	K	A	Tape Reel
RS1BL-SMA-R	RS1BG-SMA-R	SMA	K	A	Tape Reel
RS1DL-SMA-R	RS1DG-SMA-R	SMA	K	A	Tape Reel
RS1GL-SMA-R	RS1GG-SMA-R	SMA	K	A	Tape Reel
RS1JL-SMA-R	RS1JG-SMA-R	SMA	K	A	Tape Reel
RS1KL-SMA-R	RS1KG-SMA-R	SMA	K	A	Tape Reel
RS1KL-Z41-B	RS1KG-Z41-B	DO-41	K	A	Tape Box
RS1KL-Z41-R	RS1KG-Z41-R	DO-41	K	A	Tape Reel
RS1ML-SMA-R	RS1MG-SMA-R	SMA	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>RS1AG-SMA-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel, B: Tape Box (2) SMA: SMA, Z41: DO-41 (3) G: Halogen Free and Lead Free, L: Lead Free
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■ MARKING

SMA	DO-41
 <p> Cathode Band for uni-directional Only ← Product Code ← UTC □□□□ → Date Code RS1X □ → L: Lead Free G: Halogen Free P: For ES1G Only </p>	 <p> Cathode Band for uni-directional Only → RS1K □ → L: Lead Free G: Halogen Free □□□□ → Date Code </p>

RS1A THRU RS1M

DIODE

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

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

PARAMETER	SYMBOL	RATINGS							UNIT
		RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average Rectified Output Current $ T_A=75^\circ\text{C}$	I_O	1.0							A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30							A
Operating Junction Temperature Range	T_J	-55 ~ +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150							$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	25	$^\circ\text{C/W}$

Note: P.C.B. mounted with 8.0mm^2 (.013mm thick) copper pad areas.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Ratings at 25°C ambient temperature unless otherwise specified.

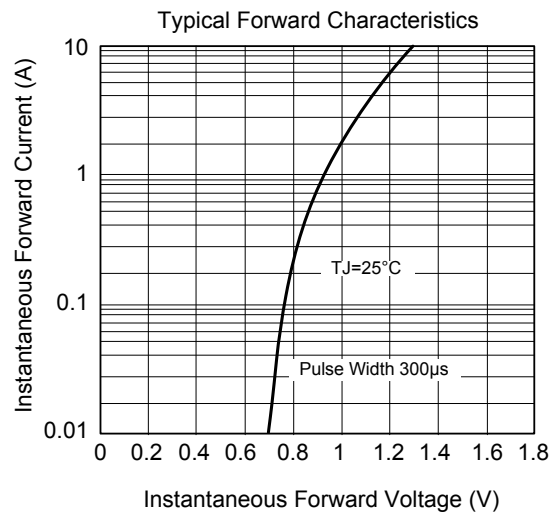
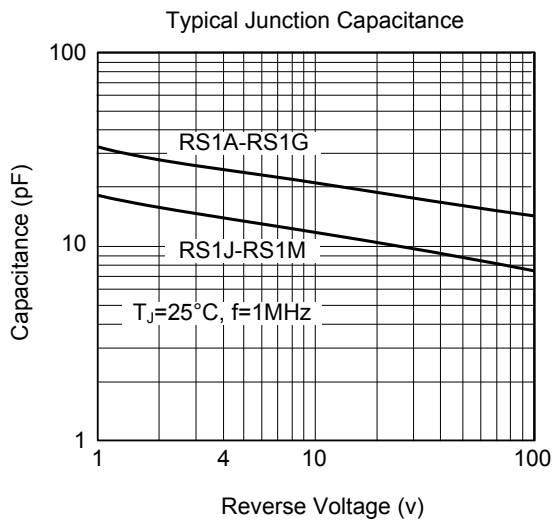
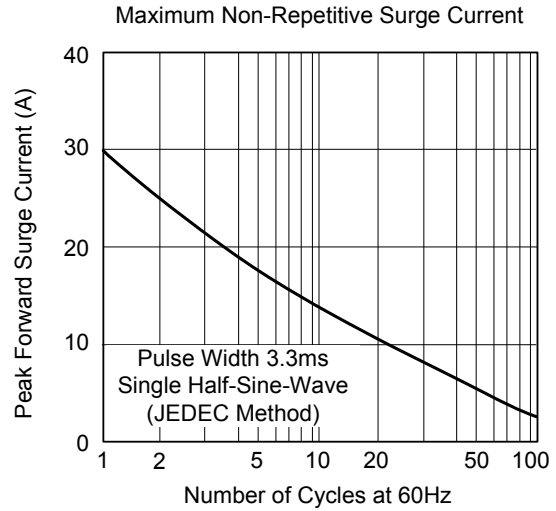
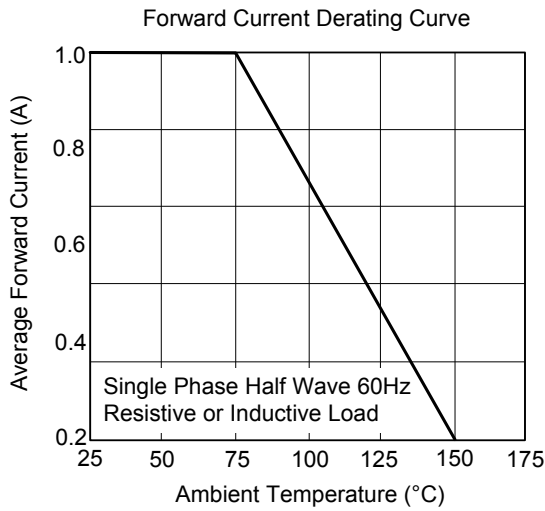
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOL	TEST CONDITIONS	RATINGS							UNIT
			RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	
Peak Forward Voltage at 1.0A DC	V_F	$I_F=1.0\text{A}$	1.3							V
Peak Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$	5.0							μA
		$T_A=110^\circ\text{C}$	500							μA
Reverse Recovery Time (Note 1)	t_{rr}		150	150	150	150	250	500	500	ns
Junction Capacitance (Note 2)	C_J		25	25	25	25	15	15	15	pF

Notes: 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.

■ TYPICAL CHARACTERISTICS



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