



# RS1K

**DIODE**

## SURFACE MOUNT FAST RECOVERY RECTIFIER

### DESCRIPTION

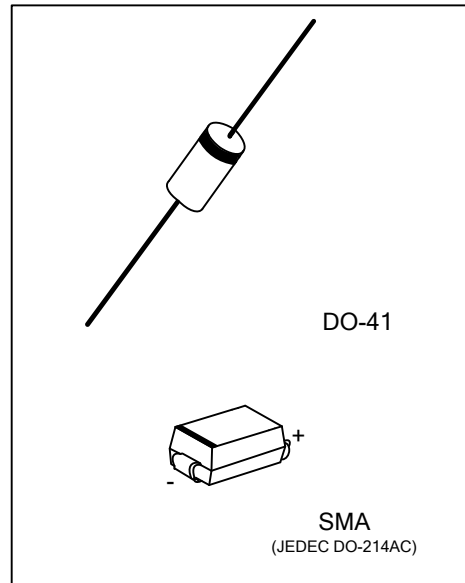
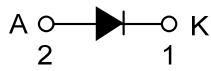
The UTC **RS1K** is a surface mount fast recovery rectifier, it uses UTC's advanced technology to provide customers with fast switching, high forward surge current and low reverse leakage, etc.

The UTC **RS1K** is suitable for surface mounted applications.

### FEATURES

- \* For surface mounted applications
- \* Low reverse leakage
- \* Built-in strain relief, ideal for automated placement
- \* High forward surge current capability
- \* Glass passivated chip junction

### SYMBOL



### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
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

Note: Pin Assignment: A: Anode K: Cathode

<p>RS1KG-SMA-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) R: Tape Reel, B: Tape Box (2) SMA: SMA, Z41: DO-41 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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### MARKING

SMA	DO-41

### ■ ABSOLUTE MAXIMUM RATINGS

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	RATINGS	UNIT
Repetitive Peak Reverse Voltage	$V_{RRM}$	800	V
RMS Voltage	$V_{RMS}$	560	V
DC Blocking Voltage	$V_{DC}$	800	V
Average Forward Rectified Current at $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30	A
Junction Temperature	$T_J$	-65 ~ +150	°C
Storage Temperature	$T_{STG}$	-65 ~ +150	°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	$\theta_{JA}$	48	°C/W

Note: P.C.B. mounted with 0.2x0.2”(5.0x5.0mm) copper pad areas.

### ■ ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

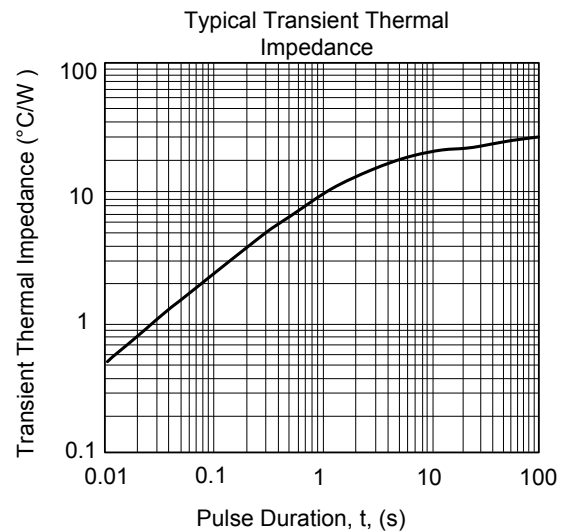
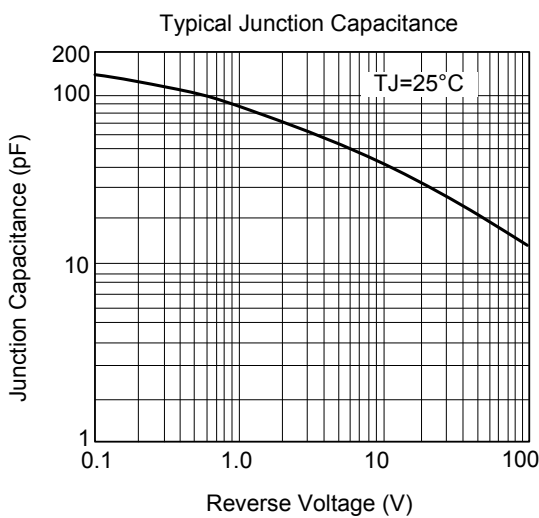
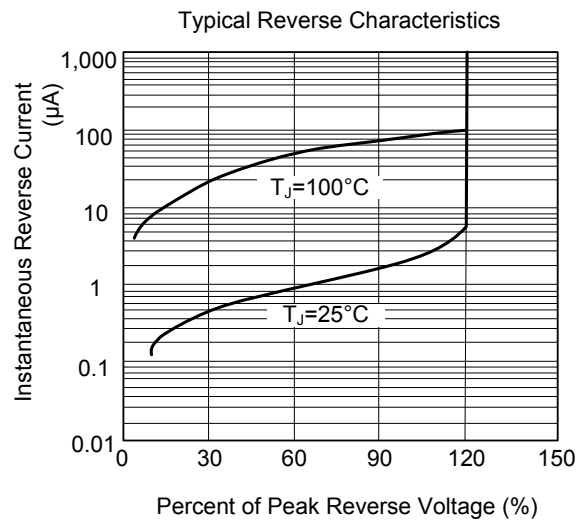
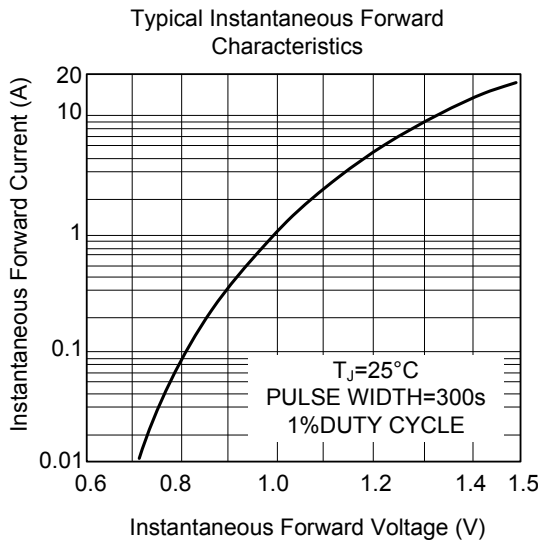
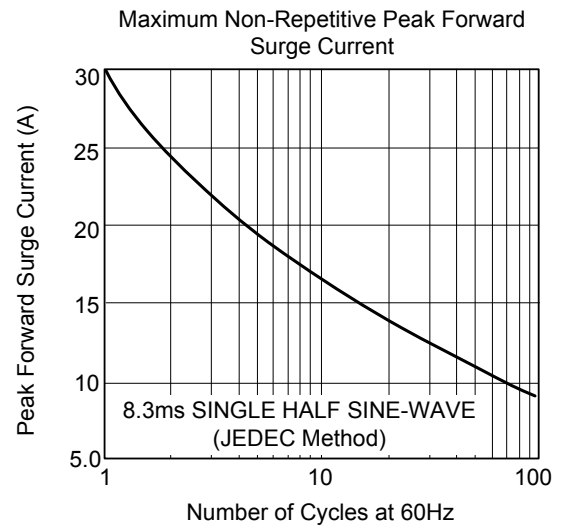
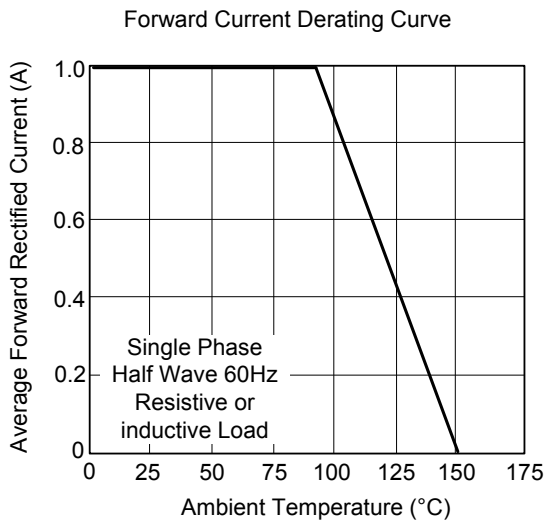
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage	$V_F$	$I_F=1.0A$			1.3	V
DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ\text{C}$			5	$\mu\text{A}$
		$T_A=100^\circ\text{C}$			50	$\mu\text{A}$
Reverse Recovery Time (Note 1)	$t_{rr}$				500	ns
Junction Capacitance (Note 2)	$C_J$			60		pF

Notes: 1. Reverse recovery condition  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$ .

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

■ TYPICAL CHARACTERISTICS



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