



RS1M

Preliminary

DIODE

SURFACE MOUNT FAST RECOVERY RECTIFIER

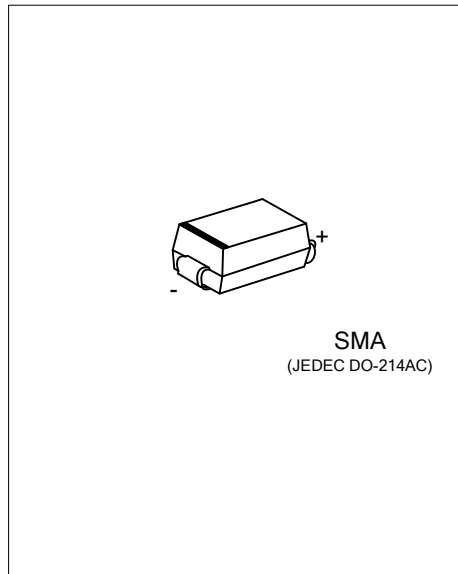
■ DESCRIPTION

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

■ FEATURES

- * Low reverse leakage
- * Fast switching for high efficiency
- * High forward surge current capability



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
RS1ML-SMA-R	RS1MG-SMA-R	SMA	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>RS1ML-SMA-R</p> <p>(1) Packing Type (2) Package Type (3) Lead Free</p>	<p>(1) R: Tape Reel (2) SMA: SMA (3) L: Lead Free, G: Halogen Free</p>
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■ MARKING INFORMATION

PACKAGE	MARKING
SMA	<p>Cathode Band for uni-directional Only ← UTC RS1M → Date Code L: Lead Free G: Halogen Free</p>

■ 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
Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
RMS Voltage	V_{RMS}	700	V
DC Blocking Voltage	V_{DC}	1000	V
Average Forward Rectified Current at $T_L=90^{\circ}\text{C}$	I_O	1.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30.0	A
Junction Temperature	T_J	-65~+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65~+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 (Note)	θ_{JA}	60	$^{\circ}\text{C}/\text{W}$

Note: 8.0mm^2 (0.13mm thick) land pads.

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

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage	V_F	$I_F=1.0\text{A}$			1.3	V
DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^{\circ}\text{C}$			5.0	μA
		$T_A=100^{\circ}\text{C}$			50.0	μA
Reverse Recovery Time	t_{rr}	$I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$			500	ns
Junction Capacitance (Note)	C_J			15.0		pF

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

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