



ES1A THRU ES1J

DIODE

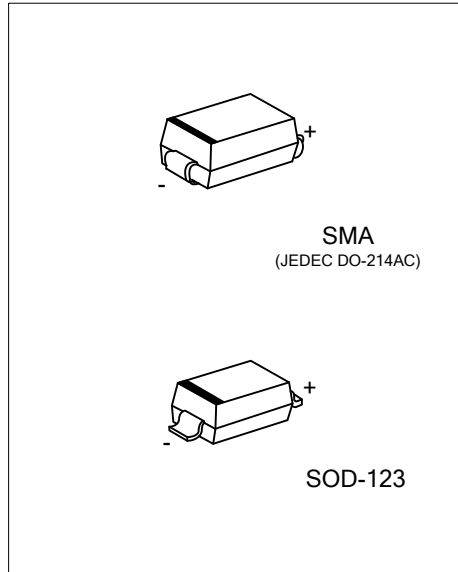
1.0AMP SURFACE MOUNT GLASS SUPERFAST RECOVERY RECTIFIER

■ **DESCRIPTION**

The UTC **ES1A thru ES1J** is a surface mount glass superfast recovery rectifier, it uses UTC's advanced technology to provide customers with low power loss and high efficiency, etc.

■ **FEATURES**

- * Low power loss
- * High efficiency



■ **ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
ES1AL-SMA-R	ES1AG-SMA-R	SMA	K	A	Tape Reel
ES1AL-CA2-R	ES1AG-CA2-R	SOD-123	A	K	Tape Reel
ES1BL-SMA-R	ES1BG-SMA-R	SMA	K	A	Tape Reel
ES1BL-CA2-R	ES1BG-CA2-R	SOD-123	A	K	Tape Reel
ES1CL-SMA-R	ES1CG-SMA-R	SMA	K	A	Tape Reel
ES1CL-CA2-R	ES1CG-CA2-R	SOD-123	A	K	Tape Reel
ES1DL-SMA-R	ES1DG-SMA-R	SMA	K	A	Tape Reel
ES1DL-CA2-R	ES1DG-CA2-R	SOD-123	A	K	Tape Reel
ES1EL-SMA-R	ES1EG-SMA-R	SMA	K	A	Tape Reel
ES1EL-CA2-R	ES1EG-CA2-R	SOD-123	A	K	Tape Reel
ES1GL-SMA-R	ES1GP-SMA-R	SMA	K	A	Tape Reel
ES1GL-CA2-R	ES1GP-CA2-R	SOD-123	A	K	Tape Reel
ES1JL-SMA-R	ES1JG-SMA-R	SMA	K	A	Tape Reel
ES1JL-CA2-R	ES1JG-CA2-R	SOD-123	A	K	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>ES1AG-SMA-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) SMA: SMA, CA2: SOD-123 (3) L: Lead Free, G: Halogen Free and Lead Free P: Halogen Free and Lead Free For ES1G only</p>
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■ **MARKING**

SMA	SOD-123
<p>Cathode Band for uni-directional Only</p> <p>Product Code</p> <p>UTC</p> <p>ES1X</p> <p>Date Code</p> <p>L: Lead Free G: Halogen Free P: For ES1G Only</p>	<p>Product Code</p> <p>EX</p> <p>L: Lead Free G: Halogen Free P: For ES1G Only</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
		ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	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 (Note 3)	SMA	60	$^\circ\text{C}/\text{W}$
	SOD-123	160	$^\circ\text{C}/\text{W}$

■ 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%.

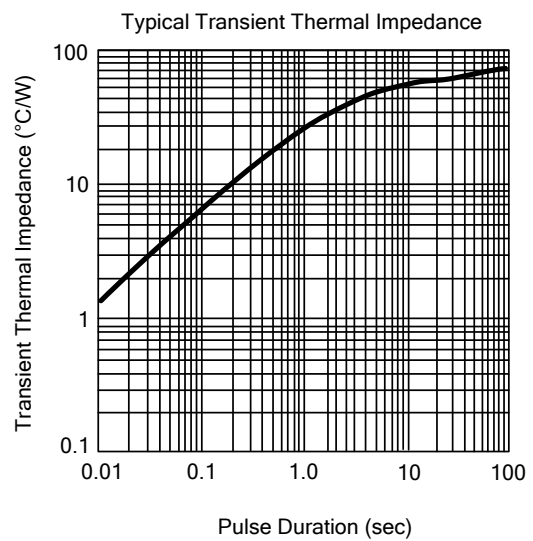
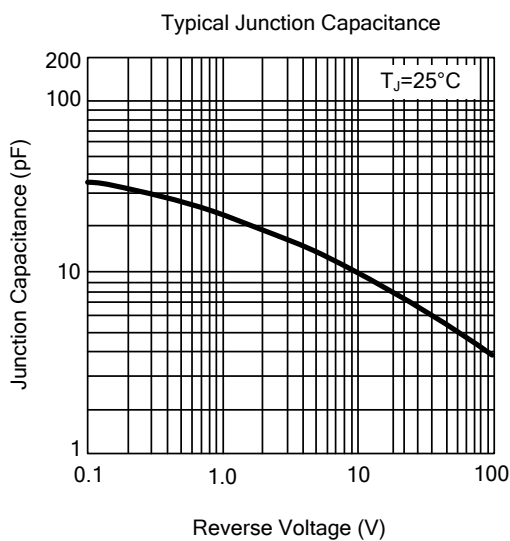
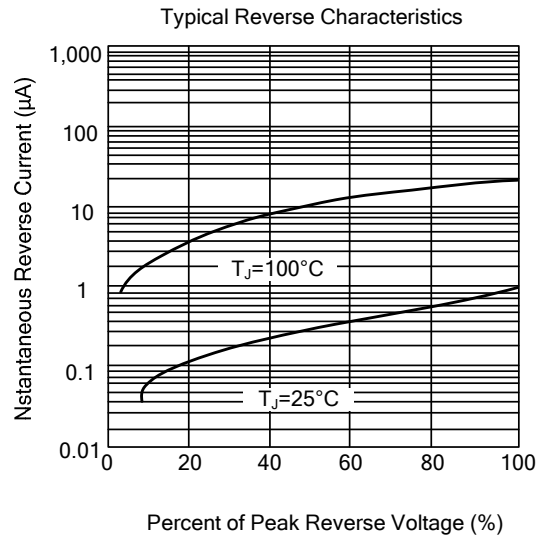
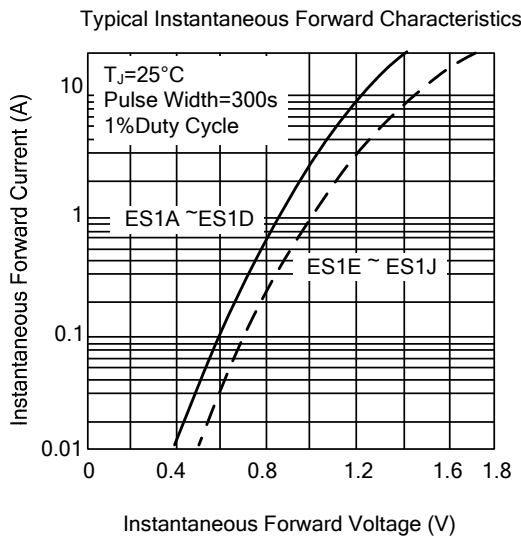
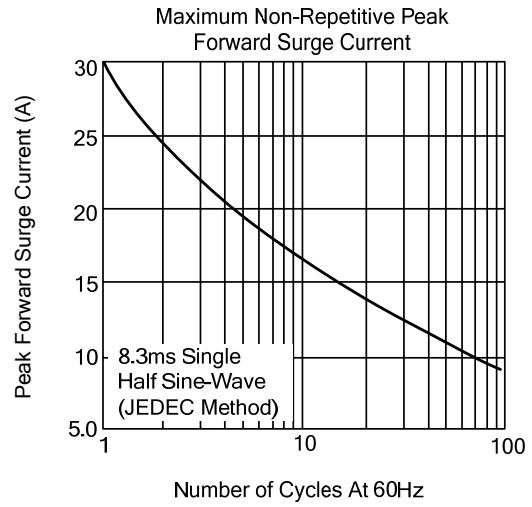
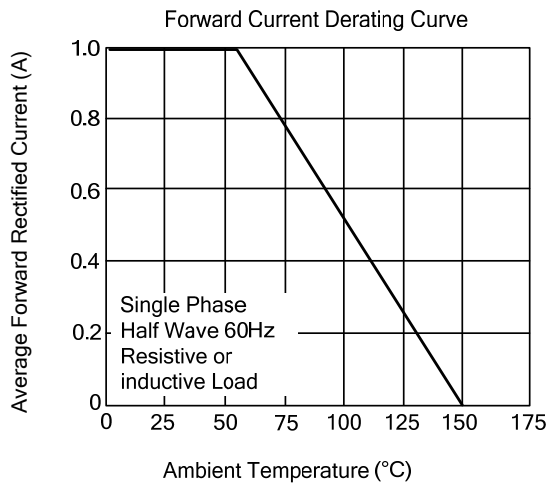
PARAMETER	SYMBOL	TEST CONDITIONS	RATINGS							UNIT
			ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	
Forward Voltage	V_{FM}	$I_F=1.0\text{A}$	0.95	0.95	0.95	0.95	1.25	1.25	1.25	V
Peak Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$	5.0							μA
		$T_A=100^\circ\text{C}$	50							μA
Reverse Recovery Time (Note 1)	t_{rr}		35							ns
Junction Capacitance (Note 2)	C_J		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.

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

TYPICAL CHARACTERISTICS



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