



## ES2D

Preliminary

DIODE

### SURFACE MOUNT SUPER FAST RECTIFIER

#### DESCRIPTION

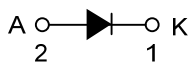
The UTC **ES2D** is a surface mount super fast rectifier, it uses UTC's advanced technology to provide customers with high forward surge current and low reverse leakage, etc.

The UTC **ES2D** is suitable for surface mounted applications.

#### FEATURES

- \* Low reverse leakage
- \* High forward surge current capability

#### SYMBOL



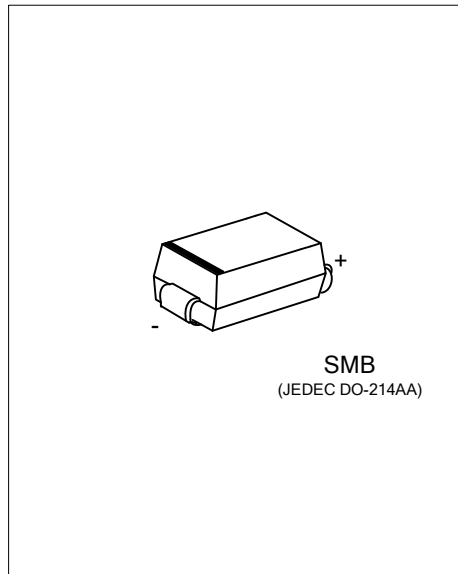
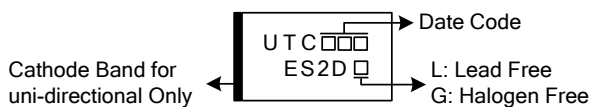
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
ES2DL-SMB-R	ES2DG-SMB-R	SMB	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

	<p>(1) R: Tape Reel</p> <p>(2) SMB: SMB</p> <p>(3) L: Lead Free, G: Halogen Free</p>
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#### MARKING



### ■ 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	$V_{RRM}$	200	V
RMS Voltage	$V_{RMS}$	140	V
DC Blocking Voltage	$V_{DC}$	200	V
Average Forward Rectified Current at $T_L=55^\circ\text{C}$	$I_{(AV)}$	2.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	50.0	A
Storage Temperature	$T_{STG}$	-65~+150	°C
Junction Temperature	$T_J$	-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 (Note 3)	$\theta_{JA}$	40	°C/W

### ■ 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	$V_F$	$I_F=2.0\text{A}$			0.95	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)	$t_{rr}$				35	ns
Junction Capacitance (Note 2)	$C_J$				60	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 0.2×0.2" (5.0×5.0mm) copper pad areas.

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