

UTC UNISONIC TECHNOLOGIES CO., LTD

US1D

Preliminary

DIODE

SURFACE MOUNT ULTRA FAST RECTIFIER

DESCRIPTION

The UTC US1D is a surface mount ultra fast rectifier, it uses UTC's advanced technology to provide customers with ultra fast switching, high forward surge current and low reverse leakage, etc.

The UTC **US1D** is suitable for surface mounted applications.

FEATURES

* Ultra fast switching for high efficiency

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

SYMBOL

А 0 К 2 1

ORDERING INFORMATION

+
 SMA (JEDEC DO-214AC)

Ordering Number		Deekege	Pin Ass	Deaking			
	Lead Free	Halogen Free	Package	1	2	Packing	
	US1DL-SMA-R	US1DG-SMA-R	SMA	К	А	Tape Reel	
Ν	lote: Pin Assignment: A: Ar						
Г							

US1DL- <u>SMA-R</u>	(1) Di Tana Dagi
(1)Packing Type	(1) R: Tape Reel
(2)Package Type	(2) SMA: SMA
(3)Lead Free	(3) L: Lead Free, G: Halogen Free

MARKING INFORMATION

PACKAGE	MARKING			
SMA	Cathode Band for uni-directional Only			

■ 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 TL=55°C	I _(AV)	1.0	А
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	30.0	А
Junction Temperature	TJ	-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 (Note 3)	θ _{JA}	50	°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	VF	I _F =1.0A			1.0	V
DC Reverse Current at Rated DC Blocking		T _A =25°C			5.0	μA
Voltage		T _A =100°C			50.0	μA
Reverse Recovery Time (Note 1)	t _{rr}				50	ns
Junction Capacitance (Note 2)	CJ			15.0		рF

Notes: 1. Reverse recovery condition I_F =0.5A, I_R =1.0A, Irr=0.25A.

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

3. P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas.



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