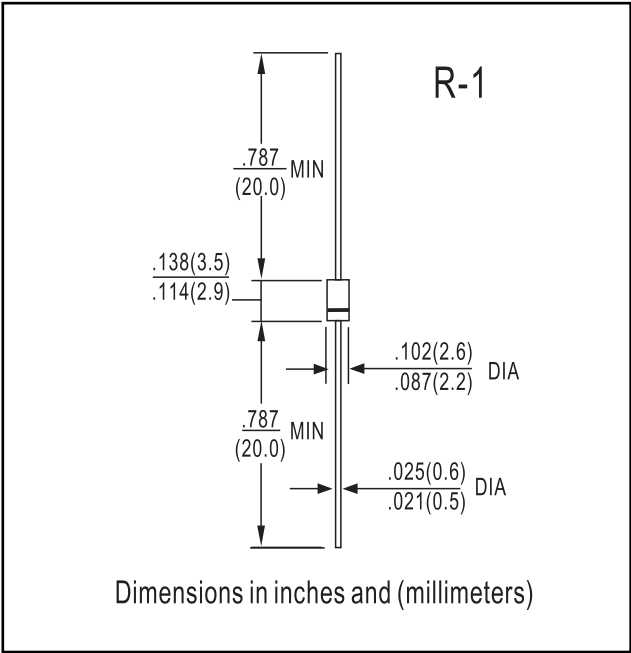




- FEATURES**
- Low profile package
 - Ideal for automated placement
 - Oxide planar chip junction
 - Ultrafast recovery times for high frequency
 - Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
 - Solder dip 260 °C, 40 s
 - Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



Mechanical Data

Case: DO-214AC (SMA)
 Epoxy meets UL 94V-0 flammability rating
Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
 E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test
Polarity: Color band denotes cathode end

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	UH1B	UH1C	UH1D	UNIT
Device marking code		HB	HC	HD	
Maximum repetitive peak reverse voltage	V_{RRM}	100	150	200	V
Maximum average forward rectified current (Fig. 1)	$I_{F(AV)}$	1.0			A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30			A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 175			$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT	
Instantaneous forward voltage ⁽¹⁾	$I_F = 0.6\text{ A}$ $I_F = 1.0\text{ A}$	$T_A = 25\text{ }^\circ\text{C}$	V_F	0.90	-	V
	$I_F = 0.6\text{ A}$ $I_F = 1.0\text{ A}$			$T_A = 125\text{ }^\circ\text{C}$	0.70	
Reverse current ⁽²⁾	rated V_R	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	I_R	- 7.5	1.0 25	μA
Maximum reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$	$T_A = 25\text{ }^\circ\text{C}$	t_{rr}	13	25	ns
Typical reverse recovery time	$I_F = 1.0\text{ A}, dI/dt = 50\text{ A}/\mu\text{s}, V_R = 30\text{ V}, I_{rr} = 0.1 I_{RM}$			21	30	
Typical softness factor (t_b/t_a)	$I_F = 1.0\text{ A}, dI/dt = 200\text{ A}/\mu\text{s}, V_R = 200\text{ V}$	$T_A = 125\text{ }^\circ\text{C}$	S	0.8	-	-
Typical reverse recovery current			I_{RM}	2.7	4.0	A
Typical stored charge			Q_{rr}	35	-	nC
Typical junction capacitance			C_J	17	-	pF



RATINGS AND CHARACTERISTIC CURVES UH1A THRU UH1D

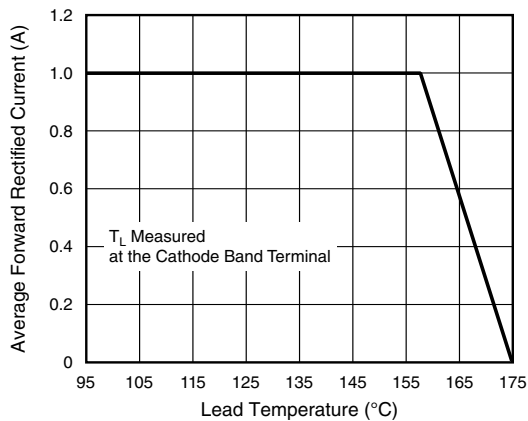


Figure 1. Maximum Forward Current Derating Curve

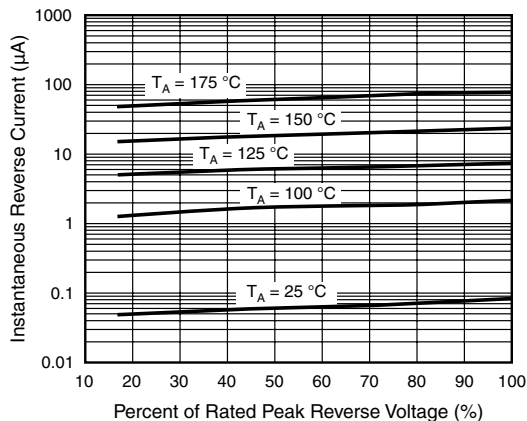


Figure 4. Typical Reverse Characteristics

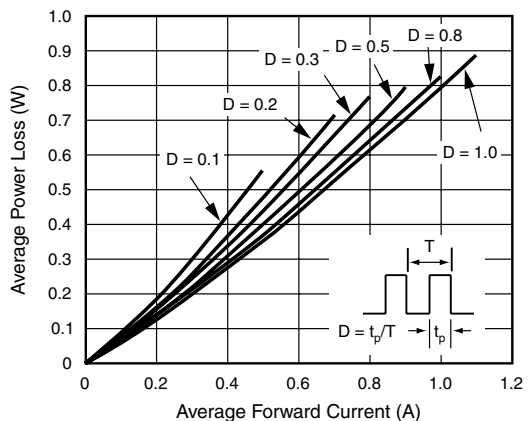


Figure 2. Forward Power Loss Characteristics

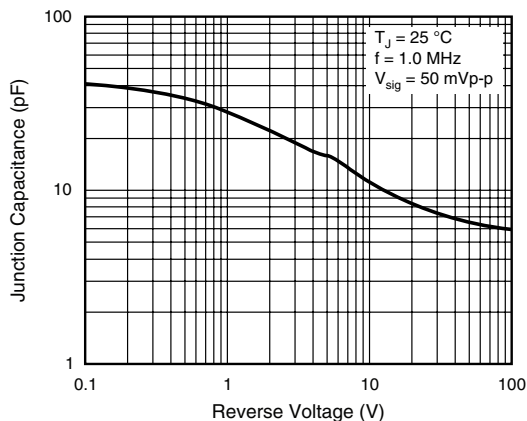


Figure 5. Typical Junction Capacitance

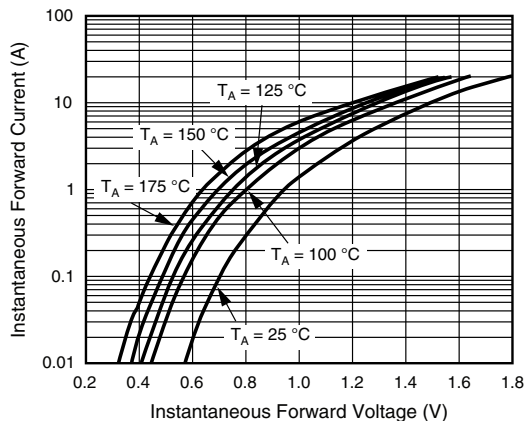


Figure 3. Typical Instantaneous Forward Characteristics

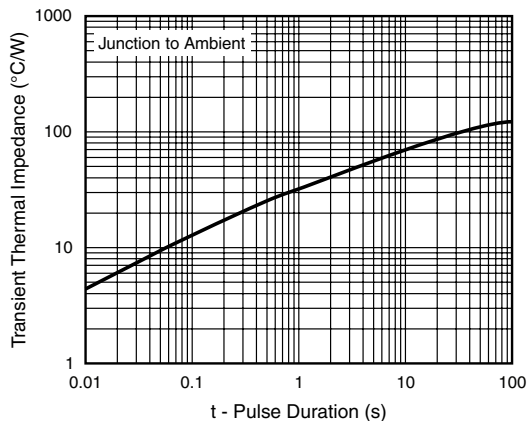


Figure 6. Typical Transient Thermal Impedance