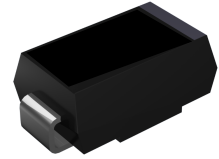


Features

- Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diode
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0



Package: DO-214AB(SMC)

Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings (T _A = 25°C unless otherwise noted)			
Parameter	Symbol	MURS320	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	200	V
Maximum RMS Voltage	V _{RMS}	140	V
Maximum DC Blocking Voltage	V _{DC}	200	V
Maximum Average Output Rectified Current @T _L =140°C	I _{F(AV)}	3.0	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I _{FSM}	80	A
Rating for Fusing (t<8.3ms)	I ² t	26	A ² sec
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

Electrical Characteristics (T _A = 25°C unless otherwise noted)				
Parameter	Test Conditions	Symbol	MURS320	Unit
Maximum Instantaneous Forward Voltage	I _F =3.0A T _A =25°C	V _F	0.875	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	5.0	μA
	T _A =150°C		150	
Maximum Reverse Recovery Time	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	t _{rr}	25	nS
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	68	pF

Thermal Characteristics			
Parameter	Symbol	MURS320	Unit
Typical Thermal Resistance ⁽¹⁾	R _{θJA}	90	°C/W
	R _{θJI}	30	

Notes:1. The thermal resistance from junction to ambient, case or mount, mounted on P.C.B with 8x8mm copper pads, 2 OZ, FR4 PCB

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

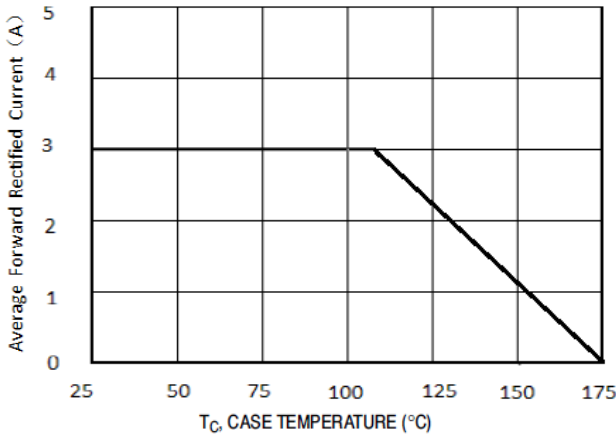


Figure 1. Forward Current Derating Curve

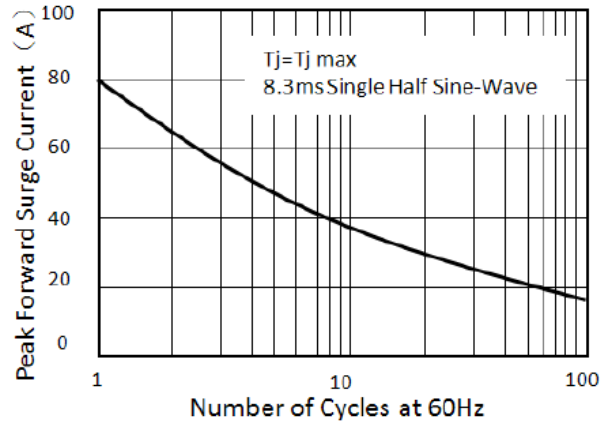


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

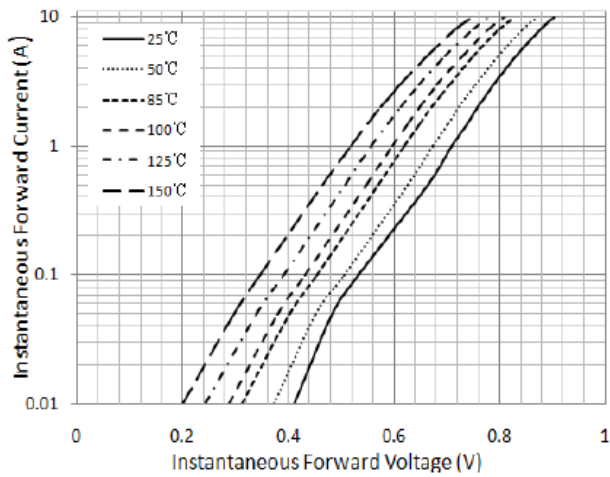


Figure 3. Typical Reverse Characteristics

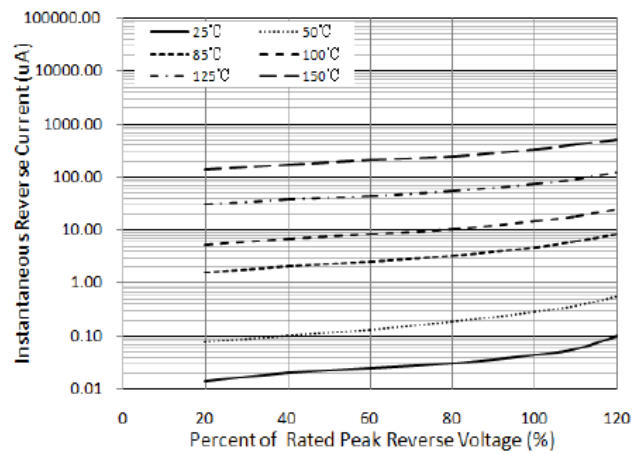
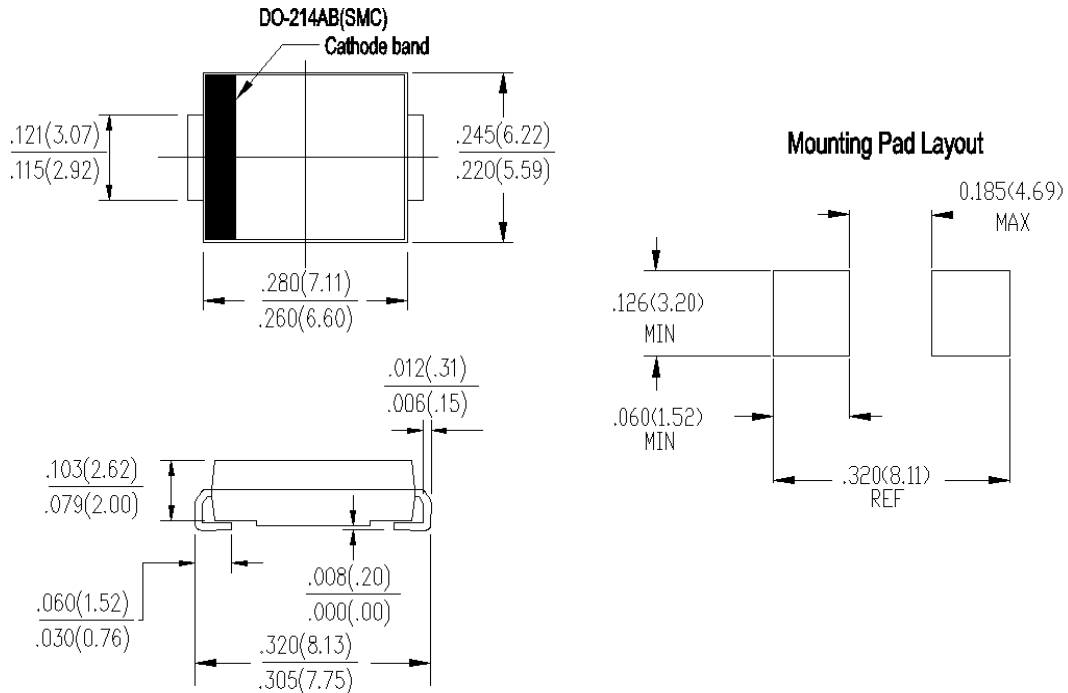


Figure 4. Typical Instantaneous Forward Characteristics

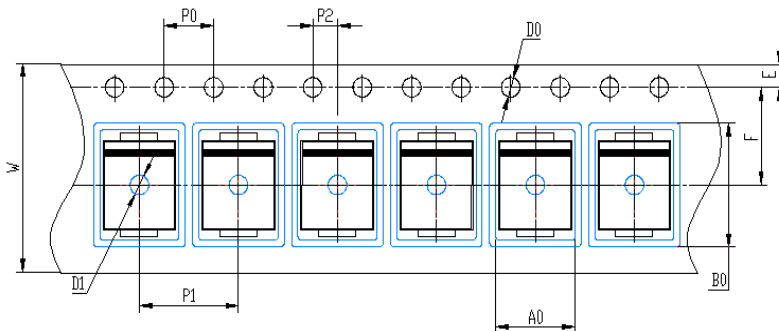
Package Outline Dimensions in inches (millimeters)



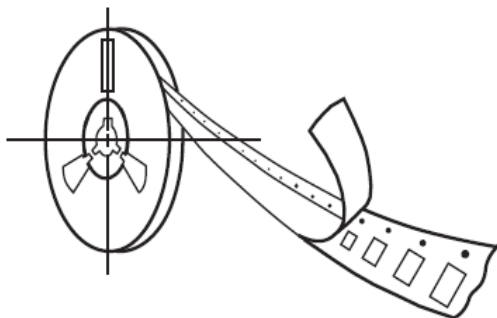
Packing Information

3000 pcs/Reel, 14 Reels/Box; 16mm Tape, 13" Reel

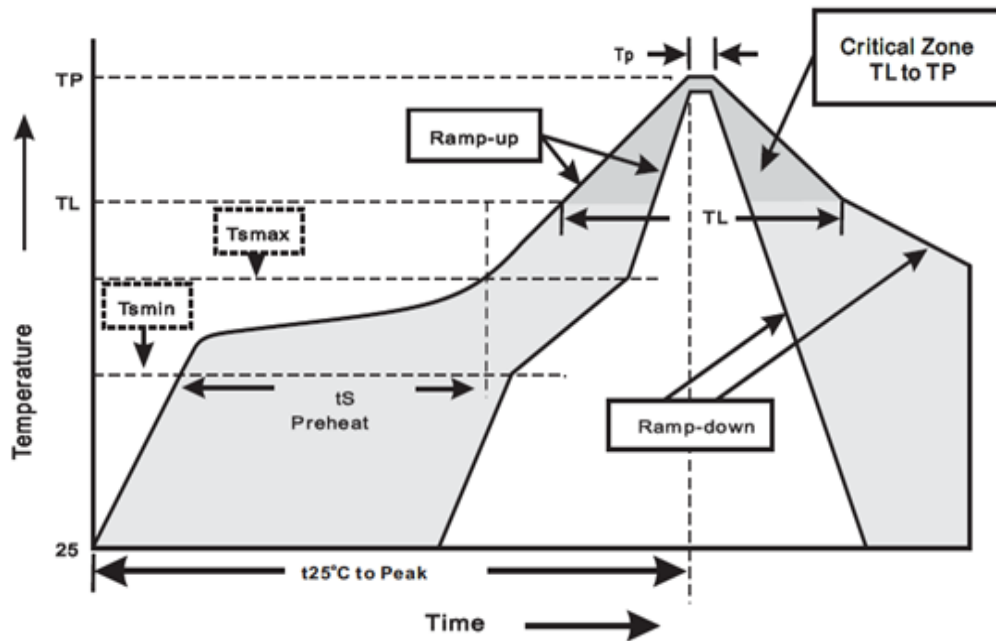
Tape & Reel Specification



Symbol	SMC(mm)
W	16±0.2
E	1.75±0.1
F	7.5±0.05
D0	1.5±0.1
D1	1.50 +0.1/-0
P0	4.0±0.1
P1	8.0±0.1
P2	2.0±0.05
A0	6.22±0.1
B0	8.31±0.1



Soldering Parameters



Reflow Soldering		Sn-Pb Eutectic Assembly	Pb-Free assembly
Pre Heat	- Temperature Min (Ts(min))	100°C	150°C
	- Temperature Max (Ts(max))	150°C	200°C
	- Time (min to max) (ts)	60 – 120 secs	60 – 180 secs
Average ramp up rate (Liquidus Temp (TL) to peak)		3°C/second max	3°C/second max
TS(max) to TL - Ramp-up Rate		3°C/second max	3°C/second max
Reflow	- Temperature (TL) (Liquidus)	183°C	217°C
	- Time (min to max) (ts)	60 – 150 seconds	60 – 150 seconds
Peak Temperature (TP)		240+0/-5 °C	240+0/-5°C
Time within 5°C of actual peak Temperature (tp)		10 –30 seconds	20 – 40 seconds
Ramp-down Rate		6°C/second max	6°C/second max
Time 25°C to peak Temperature (TP)		6 minutes Max.	8 minutes Max.
Do not exceed		260°C	260°C

Wave Soldering	
Peak Temperature :	260+0/-5°C
Dipping Time :	10 seconds
Soldering :	1 time