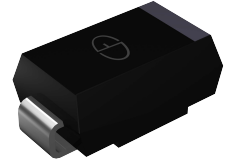


Features

- Schottky barrier rectifier
- Low forward voltage drop
- High junction temperature
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has underwriters laboratory flammability classification 94V-0



Package: DO-214AC(SMA)

Applications

For use of low voltage,high frequency inverters,free wheeling, and polarity protection application

Maximum Ratings (T_A = 25°C unless otherwise noted)

Parameter	Symbol	SL12	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	V
Maximum RMS Voltage	V _{RMS}	14	V
Maximum DC Blocking Voltage	V _{DC}	20	V
Maximum Average Forward Rectified Current	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 Temperature Range	T _J	- 55 to + 125	°C
Storage Temperature Range	T _{STG}	- 55 to + 150	°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	SL12	Unit
Maximum Instantaneous Forward Voltage	I _F =1A, T _A =25°C	V _F	0.38	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	5	mA
	T _A =100°C		100	
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	300	pF
Typical Thermal Resistance ⁽¹⁾	Juntion to Lead	R _{θJL}	30	°C/W

Note1:Thermal resistance from junction to lead,mounted on PCB with 5.0×5.0mm copper pads

Ratings and Characteristics Curves

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

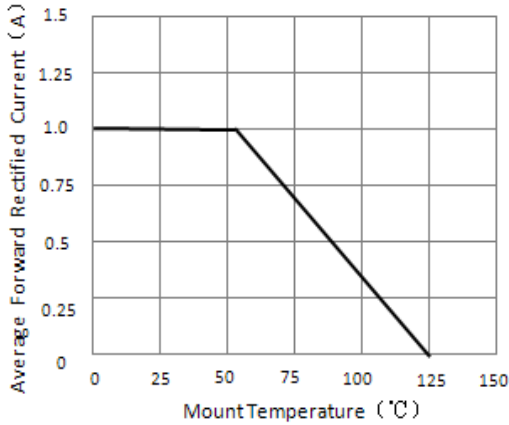


Figure 1. Forward Current Derating Curve

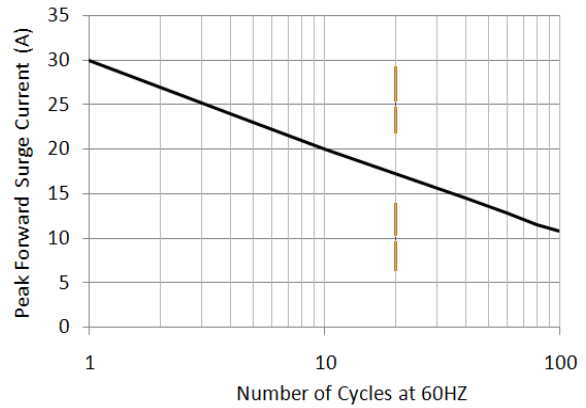


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

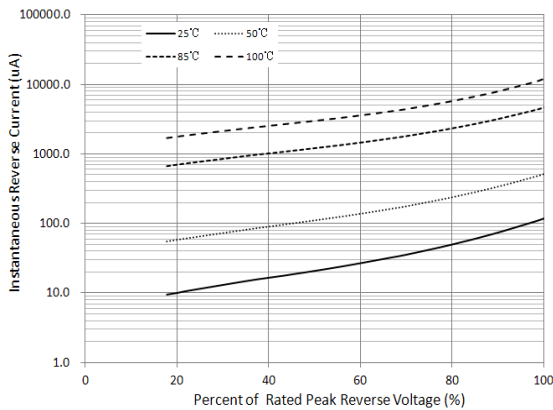


Figure 3. Typical Reverse Characteristics

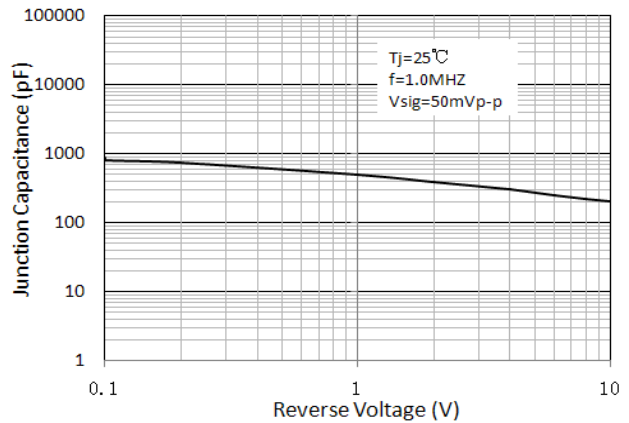


Figure 4. Typical Junction Capacitance

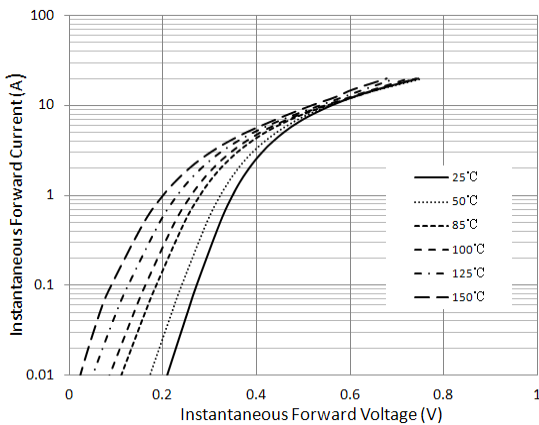
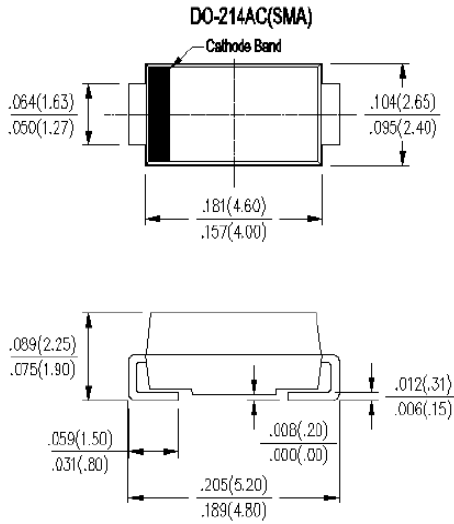


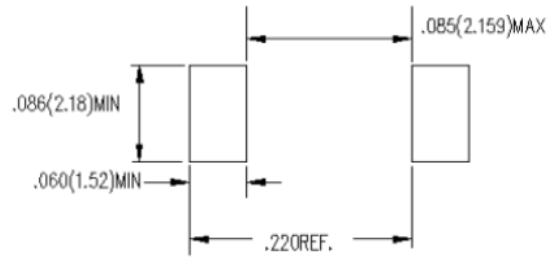
Figure 5. Typical Instantaneous Forward Characteristics

Package Outline Dimensions

in inches (millimeters)



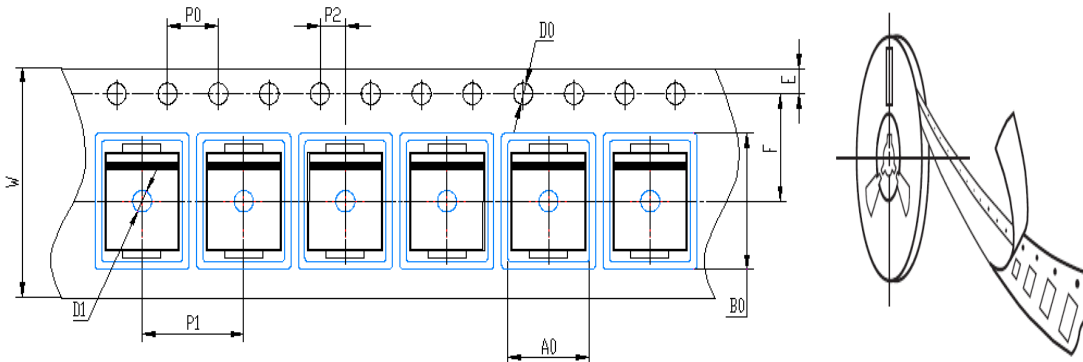
MOUNTING PAD LAYOUT



Packing Information

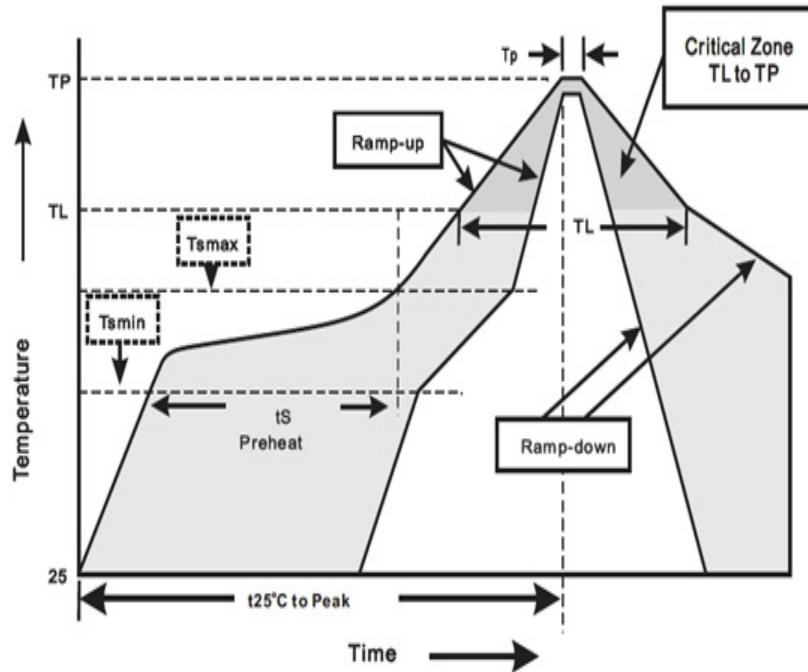
7500 pcs/Reel, 18 Reels/Box; 12mm Tape, 13" Reel

Tape & Reel Specification



Symbol	SMA(mm)
W	12±0.2
E	1.75±0.1
F	5.5±0.05
D0	1.5±0.1
D1	1.50 +0.1/-0
P0	4.0±0.1
P1	4.0±0.1
P2	2.0±0.05
A0	2.65±0.1
B0	5.25±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