S2A THRU S2M

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 2.0 Ampere

Features

SMA

- Glass passivated chip
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 260℃/10S at terminals
- Component in accordance to
  ROHS 2002/95/1 and WEEE 2002/96/EC

DO-214AC (SMA)

Mechanical Data

- Case: JEDEC SMAFL mold plastic
  Body over glass passivated chip
- Terminals:Solder plated, solderable per J-STD-002B and JESD22-B102D
- Polarity: Laser band denote cathode band
- Weight: 0.002 ounce, 0.064 gram

Maximum Ratings and Electrical Characteristics

- Ratings at 25℃ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER		SYMBOLS	S2A	S2B	S2C	S2D	S2G	S2K	S2M	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current		$I_{(AV)}$	2.0							Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	50							Amps
Maximum Instantaneous Forward Voltage at 2.0A		V_F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A = 25℃	I_R	5.0							μA
	T_A = 125℃		50							
Typical Junction Capacitance (NOTE 1)		C_J	15							pF
Typical Thermal Resistance (NOTE 2)		$R_{\theta JA}$	80							℃/W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 to +150							℃

Notes:

1.Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.

2.Thermal Resistance from Junction to Ambient at. 1.6×1.6mm^2 copper pad areas.

Ratings and Characteristic Curves (TA=25℃ unless otherwise noted)

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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

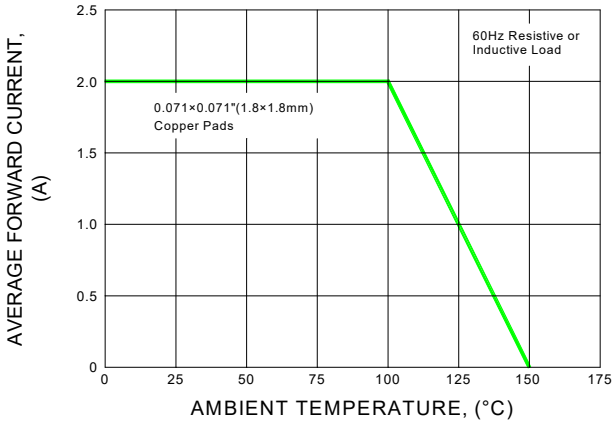


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

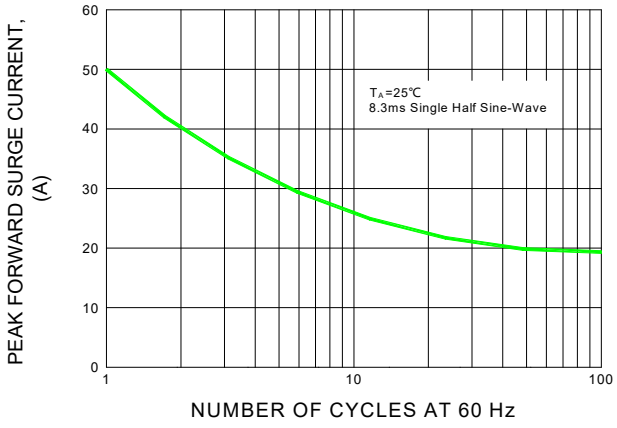


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

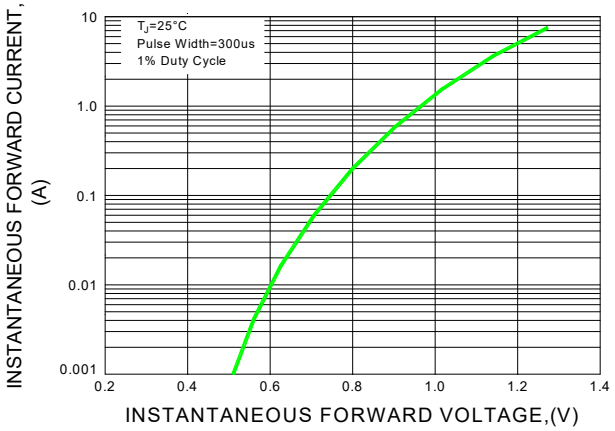


FIG.4-TYPICAL REVERSE CHARACTERISTICS

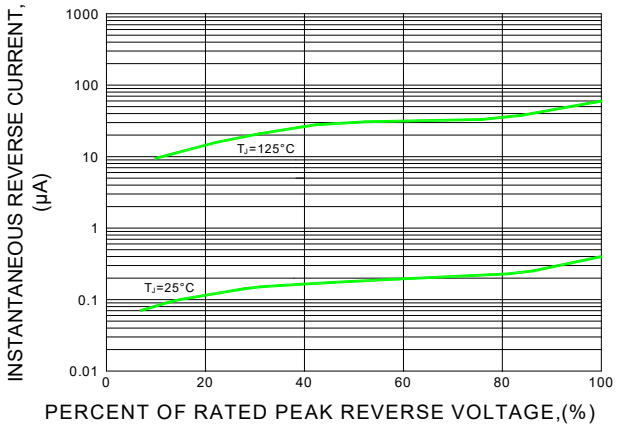
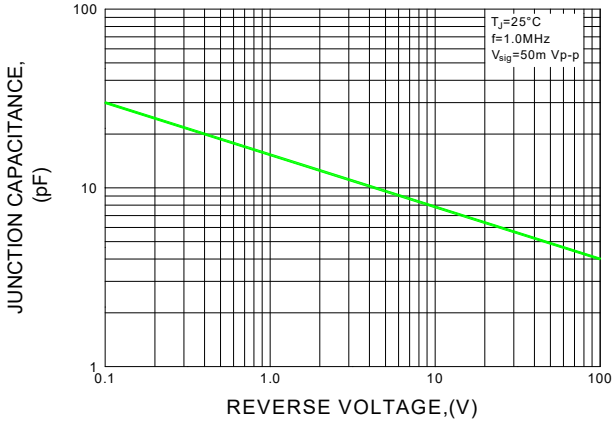


FIG.5-TYPICAL JUNCTION CAPACITANCE



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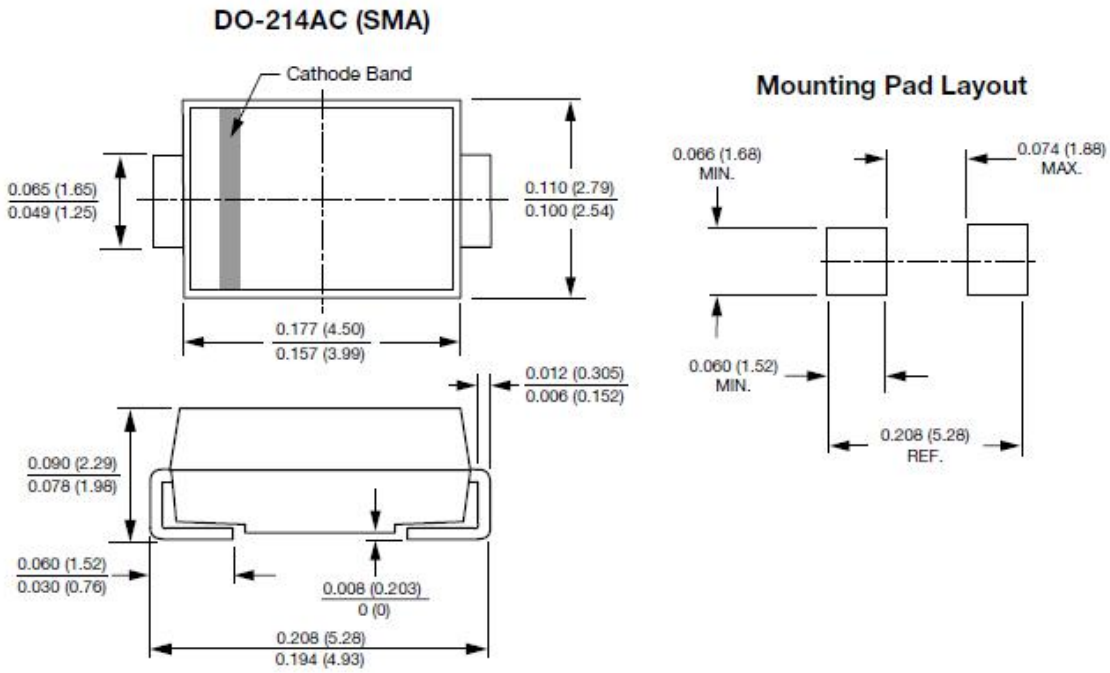
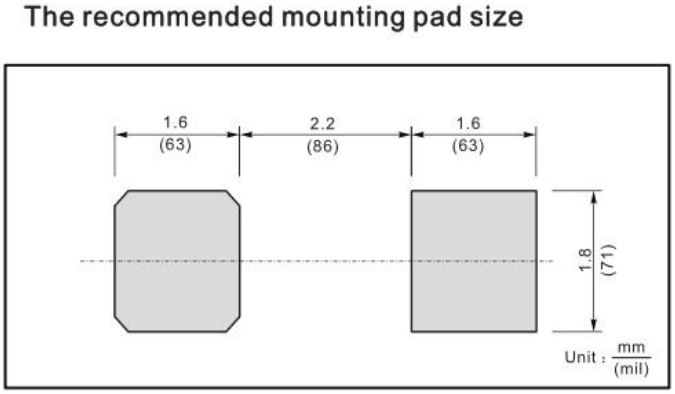
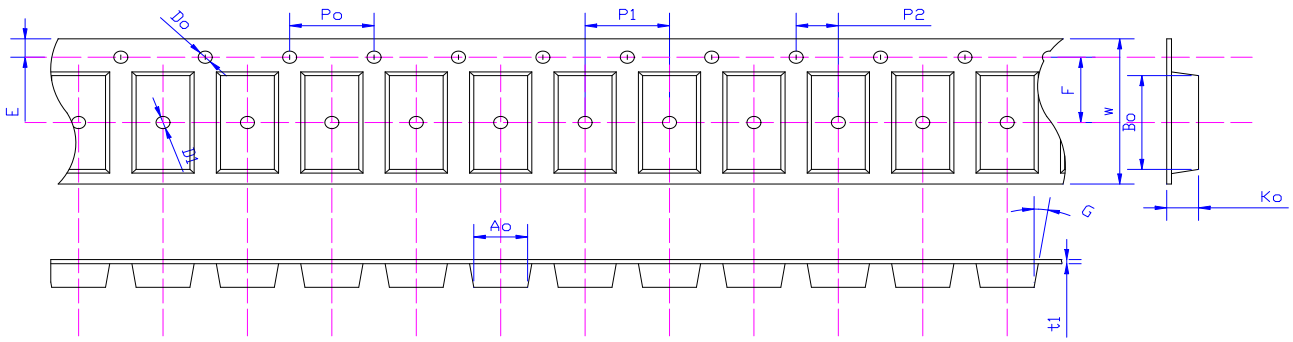
Package Outline Dimensions in inches (millimeters)



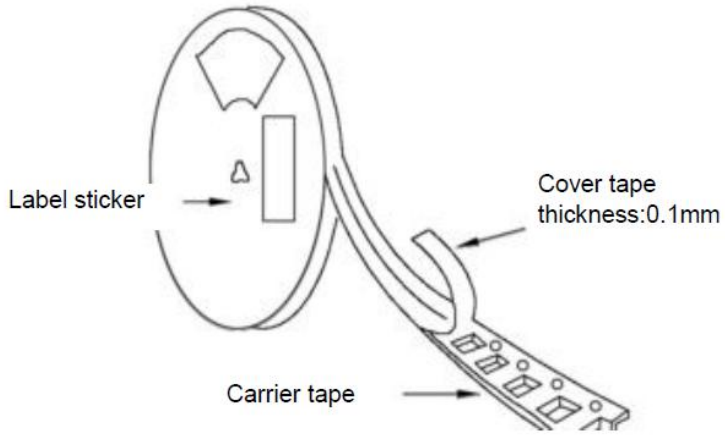
The Recommended Mounting Pad Size



Package Reel Information

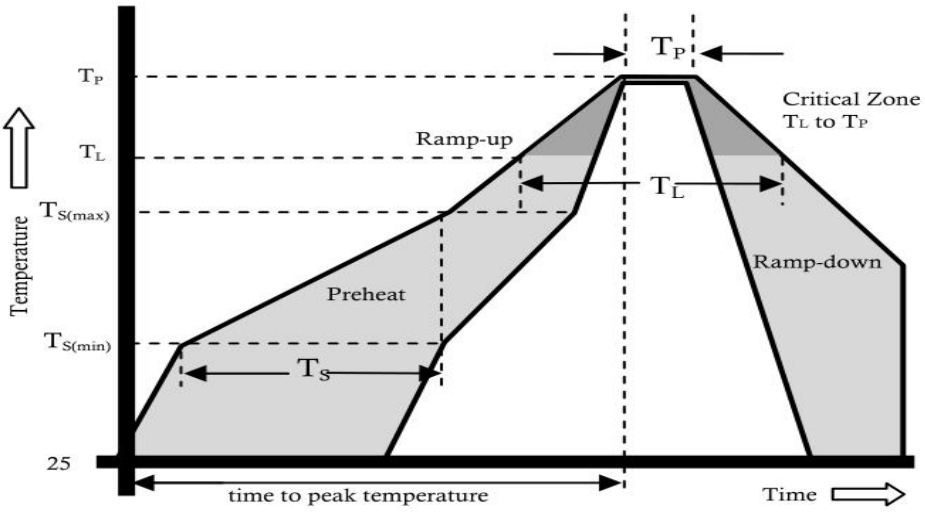


Specifications	Ao	Bo	Ko	Po	W	t1
SMA	2.55±0.10	5.10±0.10	2.36±0.10	4.00±0.1	12.0±0.05	0.23±0.02



DEVICE TYPE	Tape Width	13"Reel			07"Reel			
		Q'TY/REEL(pcs)	BOX/CARTON	Q'TY/CARTON(pcs)	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTON	Q'TY/CARTON(pcs)
SMA	12mm	5000	8	80000	1500	2	16	48000

Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
T_S(max) to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_L)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C