



M1 THRU M7

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

0.8 Ampere

Features

- Glass passivated chip:46mil
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 260°C/10S at terminals
- Component in accordance to
ROHS 2002/95/1 and WEEE 2002/96/EC



DO-214AC (SMA)

Mechanical Data

- Case: JEDEC SOD-123FL 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: 0.0024 ounce, 0.068 gram

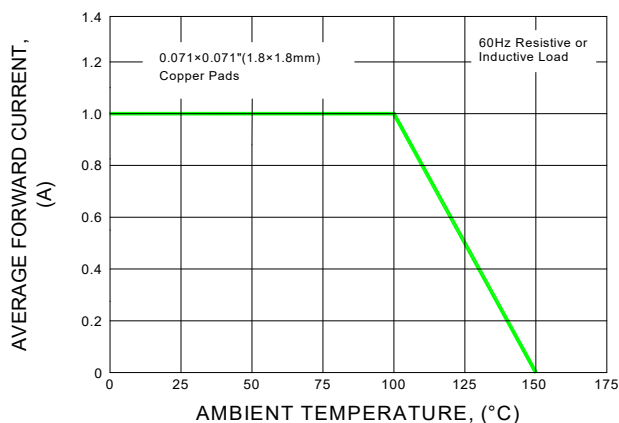
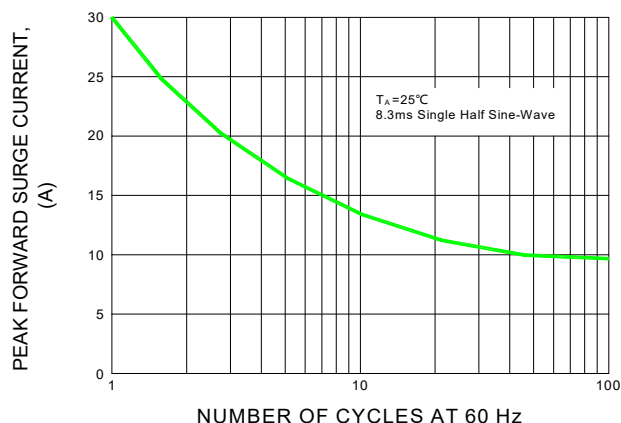
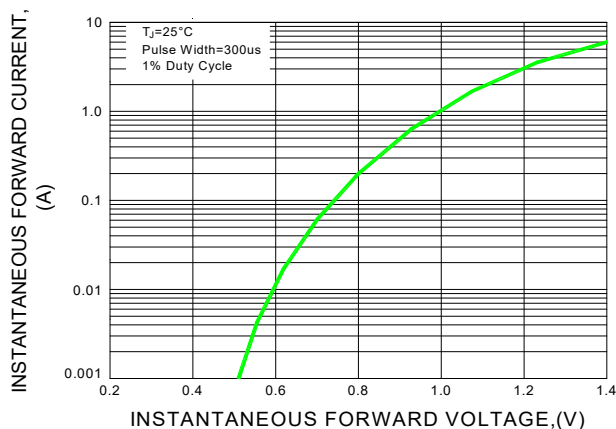
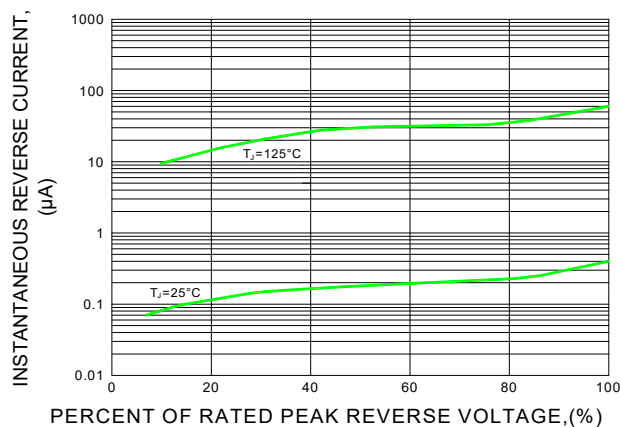
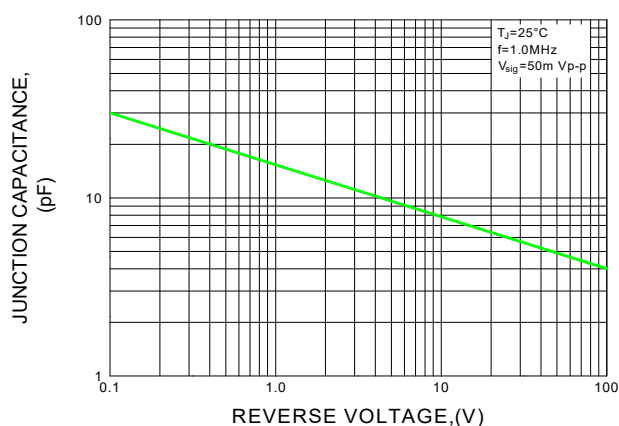
Maximum Ratings and Electrical Characteristics

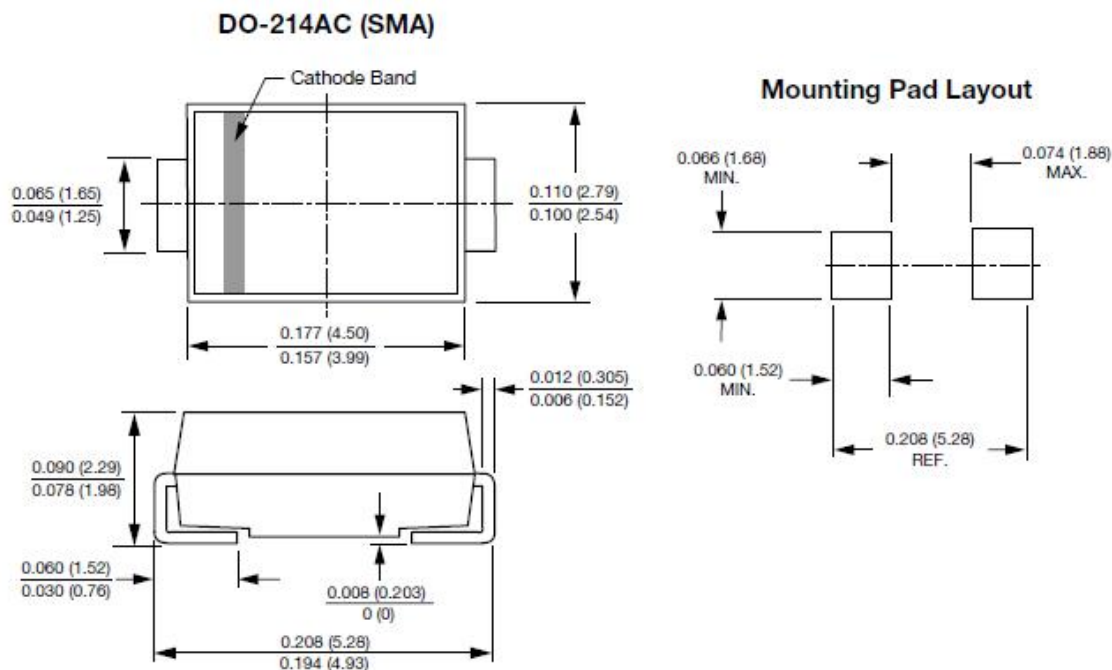
- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER		SYMBOL S	M1	M2	M3	M4	M5	M6	M7	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)	1.0							Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A		V _F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A = 25°C	I _R	5.0							μA
	T _A = 125°C		50							
Typical Junction Capacitance (NOTE 1)		C _J	9							pF
Typical Thermal Resistance (NOTE 2)		R _{θJA}	110							°C/W
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150							°C

Notes:

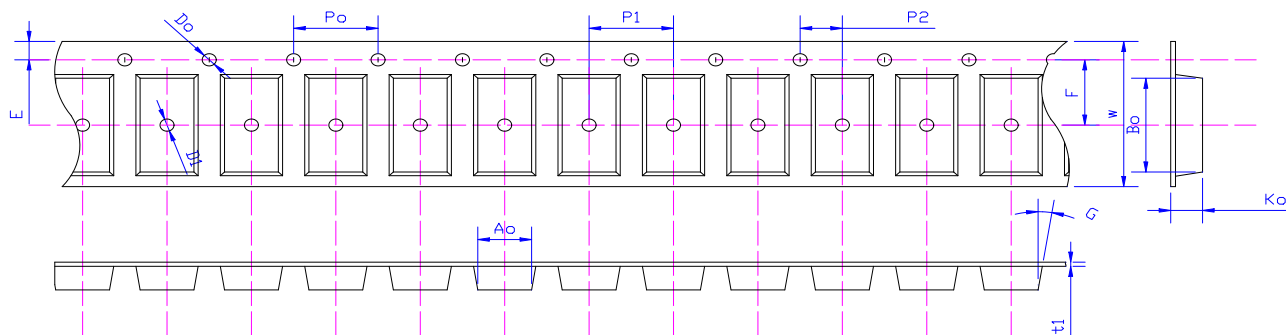
1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal resistance from Junction to ambient and from junction to lead mounted on PCB. with 0.2×0.2"(5.0 × 5.0mm) copper pad areas

**M1 THRU M7****VOLTAGE RANGE****50 to 1000 Volts****CURRENT****0.8 Ampere****Ratings and Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)****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**

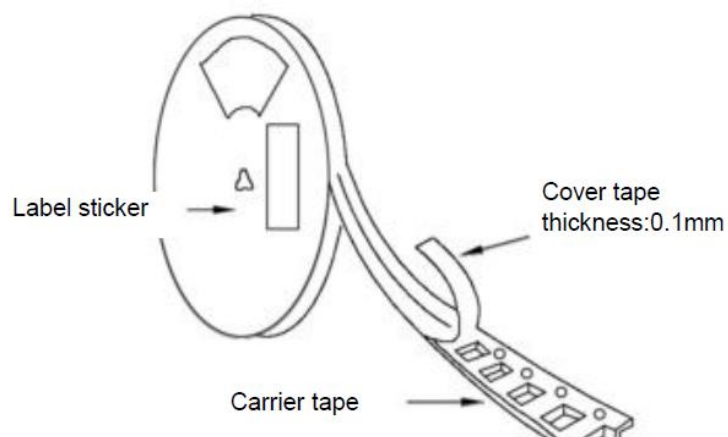
**M1 THRU M7****VOLTAGE RANGE****50 to 1000 Volts****CURRENT****0.8 Ampere****Package Outline Dimensions** in inches (millimeters)

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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



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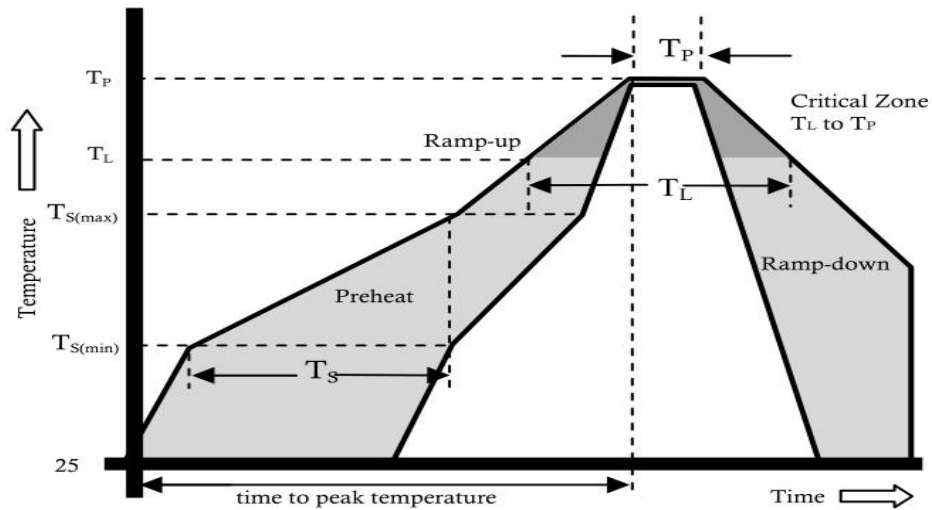
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Reflow Profile



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