

General Purpose Surface Mount Rectifiers

Features

- Low profile package
- For surface mounted applications
- Glass passivated chip junction
- High forward surge capability
- High temperature soldering guaranteed
260°C/10 seconds at terminals

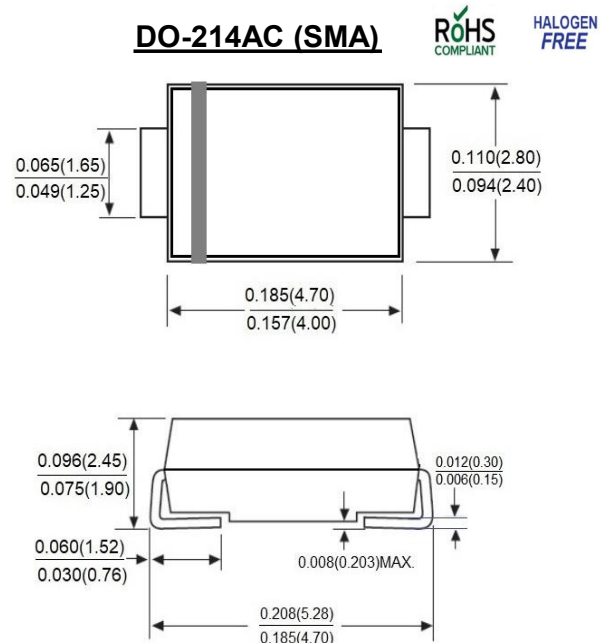
Mechanical Data

- **Package:** DO-214AC (SMA)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Cathode line denotes the cathode end

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication.

Reverse Voltage: 50 to 1000V
Forward Current: 1.0 Amp



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

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

Parameter&Test Conditions	SYM.	M1	M2	M3	M4	M5	M6	M7	Unit
Device marking code		M1	M2	M3	M4	M5	M6	M7	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	IO(AV)	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	IFSM	30							A
Maximum Thermal Resistance, Junction To Ambient (Note1)	RθJA	75							℃/W
Operating junction and storage temperature range	Tj,TSTG	-55 to+150							℃

Electrical Characteristics (Ta=25°C Unless otherwise specified)

Parameter&Test Conditions		SYM.	M1	M2	M3	M4	M5	M6	M7	Unit
Maximum Instantaneous Forward Voltage IFM =1A		V _{FM}	1.1							V
Maximum DC reverse current at rated DC blocking voltage	TA = 25℃	I _R	5							μA
	TA = 125℃		100							
Typical junction capacitance(Note2)		C _J	6							pF

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. The typical data above is for reference only.

Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

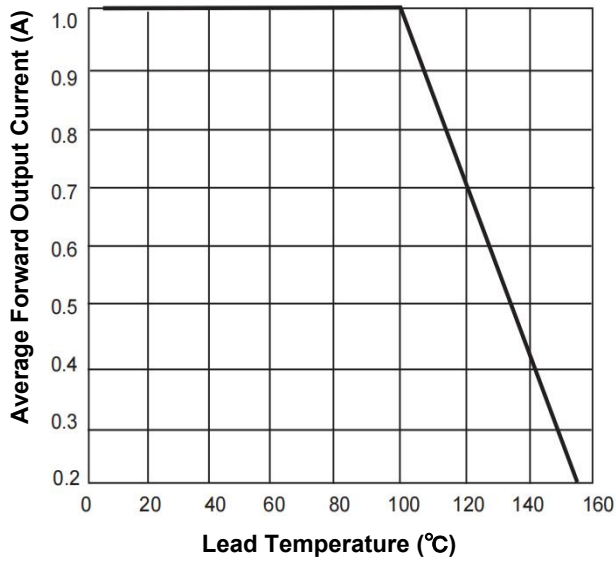


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

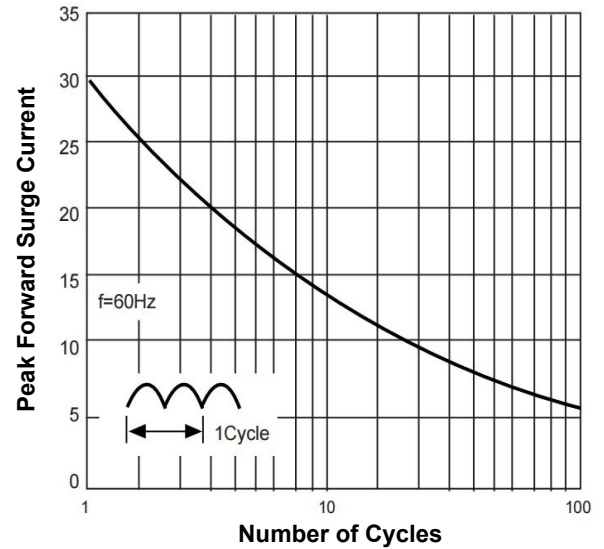


FIG. 3- TYPICAL FORWARD VOLTAGE

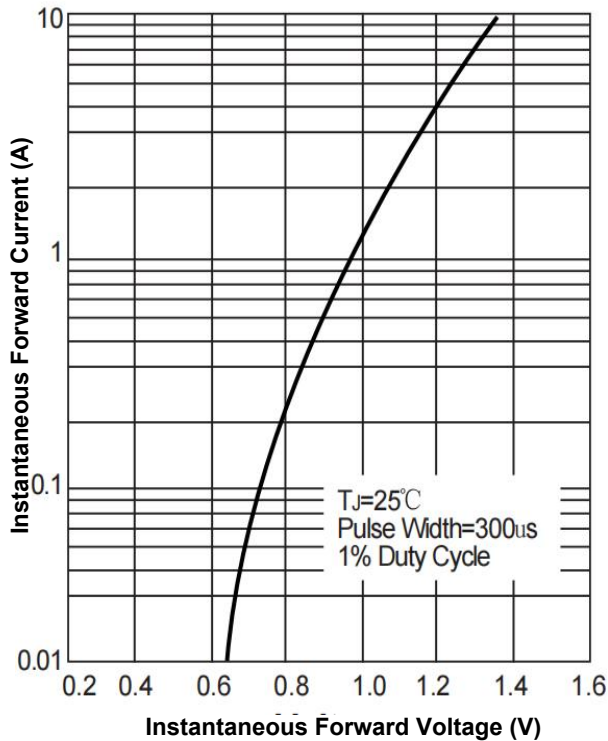
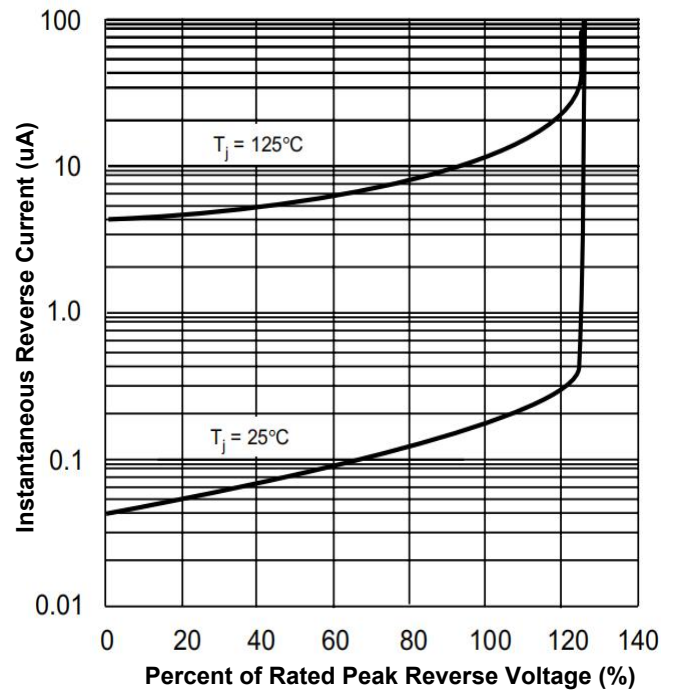
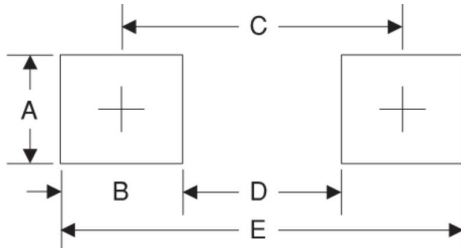


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.

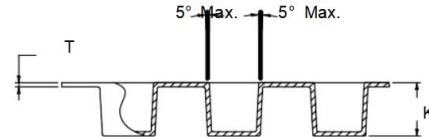
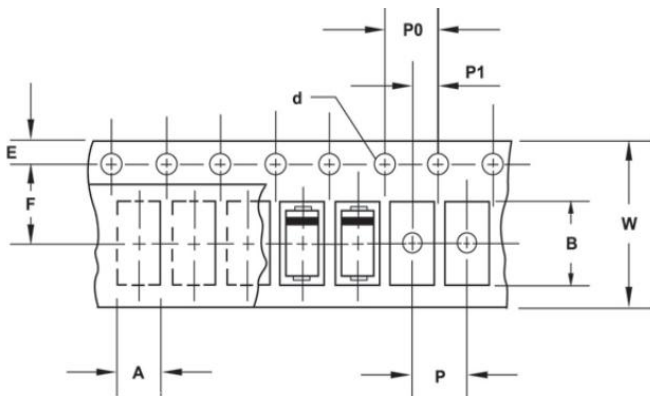
Recommended Pad Layout



SYMBOL	Millimeters
A	1.70
B	2.50
C	4.00
D	1.50
E	6.50

Package Information

Carrier Dimension(mm)



W	F	d	E
12.0	5.5	∅ 1.55	1.75
A	B	K	T
2.79	5.33	2.36	0.23
P0	P1	P	Tolerance
4.0	2.0	4.0	0.10

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMA	11'	278	5	290	10	400*310*310	100

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