

Glass Passivated Silicon Rectifiers

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Ampere

RoHS Device

Halogen Free



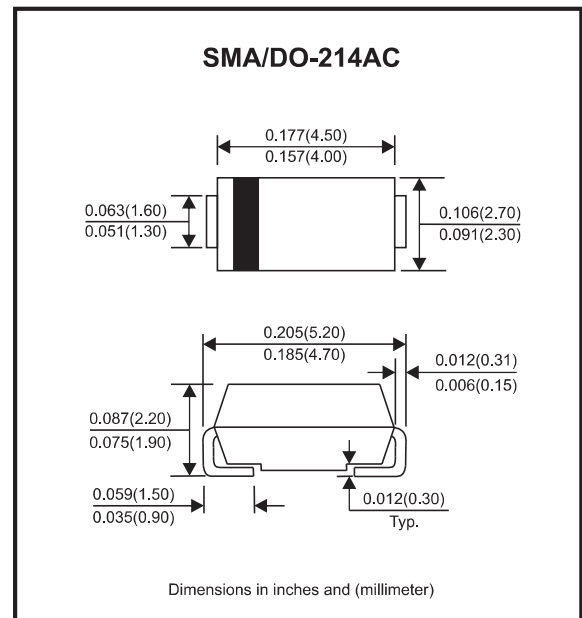
Features

- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High surge capacity
- Glass passivated chip junction
- Meet UL flammability classification 94V-0

Mechanical data

- Case: JEDEC SMA molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Circuit diagram



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%.

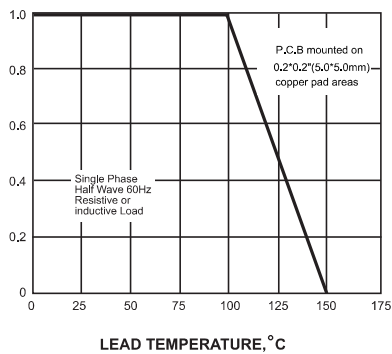
Parameter	Symbols	M1	M2	M3	M4	M5	M6	M7	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Max instantaneous forward voltage at 1.0A	V_F	1.1							V
Maximum DC reverse current $T_a = 25^\circ\text{C}$ at rated DC blocking voltage $T_a = 100^\circ\text{C}$	I_R	5.0 50							μA
Typical junction capacitance (Note 1)	C_j	15							pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	75							$^\circ\text{C/W}$
Operating and storage temperature range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

Notes: 1. P.C.B mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas.

Rating and Characteristic Curves

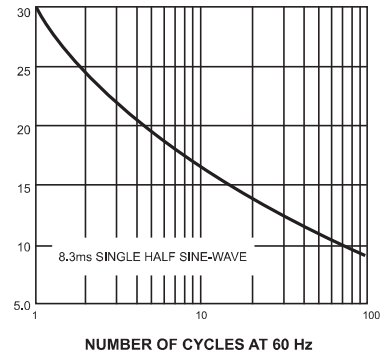
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



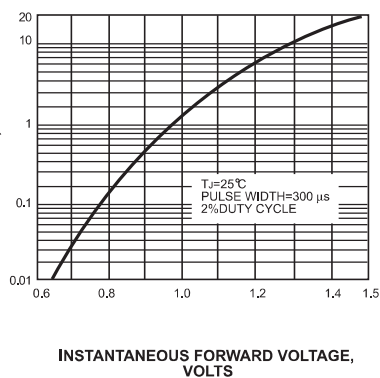
PEAK FORWARD SURGE CURRENT,
AMPERES

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



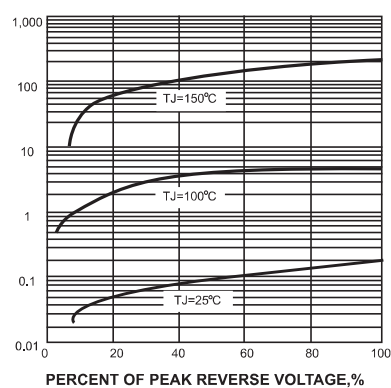
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



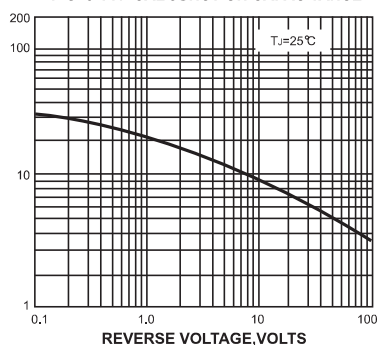
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



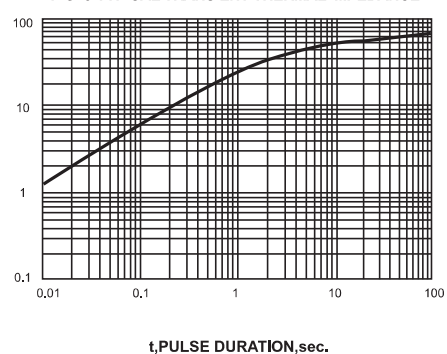
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



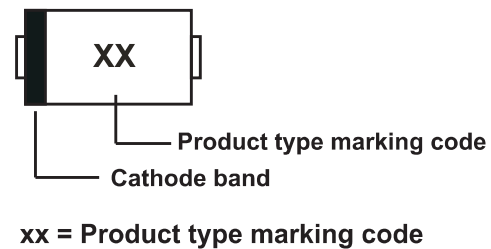
TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



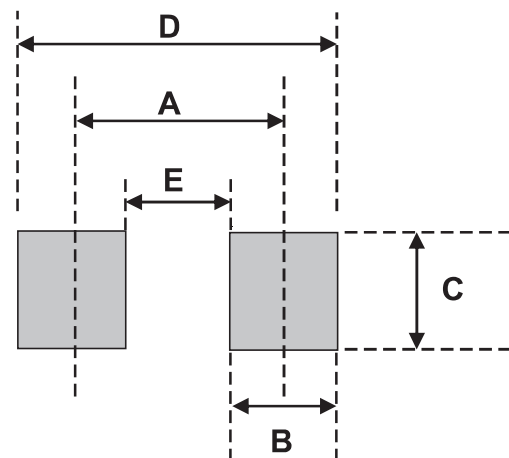
Marking Code

Part Number	Marking code
M1	M1
M2	M2
M3	M3
M4	M4
M5	M5
M6	M6
M7	M7



Suggested PAD Layout

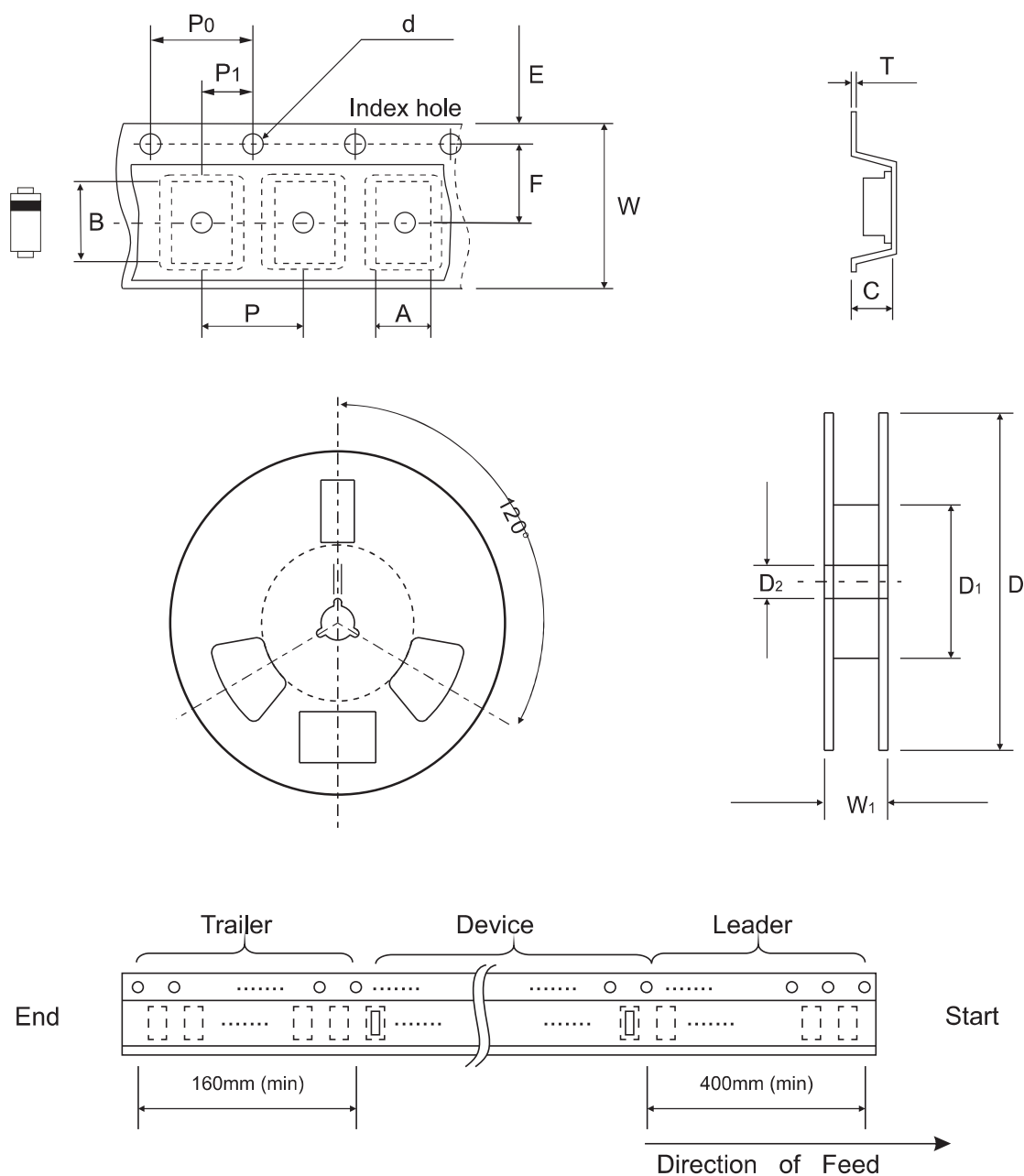
SIZE	DO-214AC (HSMA)	
	(mm)	(inch)
A	4.00	0.157
B	2.50	0.100
C	1.80	0.071
D	6.50	0.256
E	1.50	0.060



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AC (HSMA)	5,000	13

Reel Taping Specification



DO-214AC (HSMA)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.80 ± 0.10	5.33 ± 0.10	2.36 ± 0.10	1.55 ± 0.10	330 ± 2.00	50 MIN.	13.50 ± 2.00
	(inch)	0.110 ± 0.004	0.210 ± 0.004	0.093 ± 0.004	0.061 ± 0.004	12.992 ± 0.079	1.969 MIN.	0.531 ± 0.079

DO-214AC (HSMA)	SYMBOL	E	F	P	P0	P1	W	W1	T
	(mm)	1.75 ± 0.10	5.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	12.00 ± 0.10	18.40 MAX.	0.25 ± 0.10
	(inch)	0.069 ± 0.004	0.217 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.472 ± 0.004	0.724 MAX.	0.010 ± 0.004

Company reserves the right to improve product design , functions and reliability without notice.

Rev:1.0