

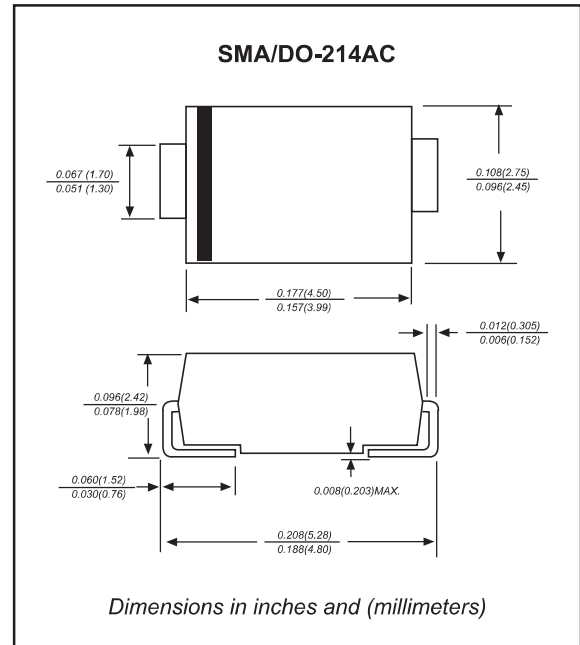
Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Compliant to RoHS Directive 2011/65/EU

Mechanical data

- ◆ **Case:** JEDEC DO-214AC molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A = 25^\circ\text{C}$ unless otherwise noted)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Average Rectified Output Current (Note 1) $T_T = +90^\circ\text{C}$	I_O	2.0	A
Non-Repetitive Peak Forward Surge Current, Single Sine-Wave Superimposed on Rated Load, 60Hz	I_{FSM}	80	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Conditions
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	30	—	—	V	I _R = 2.0mA
Forward Voltage Drop	V _F	—	—	0.450	V	I _F = 2.0A
Leakage Current	I _R	—	—	150	μA	V _R = 15V
			—	1.0	mA	V _R = 20V
			—	2.0		V _R = 30V
Total Capacitance	C _T	—	180	—	pF	f = 1MHz, V _R = 4.0VDC
Thermal Resistance, Junction to Terminal	R _{θJT}	—	35	—	°C/W	—

Notes: 1. Device mounted on FR-4 substrate, 0.4"×0.5", 2oz, single-sided, PC boards with 0.2"×0.25" copper pad.
2. Short duration pulse test used to minimize self-heating effect.

Rating and characteristic curves

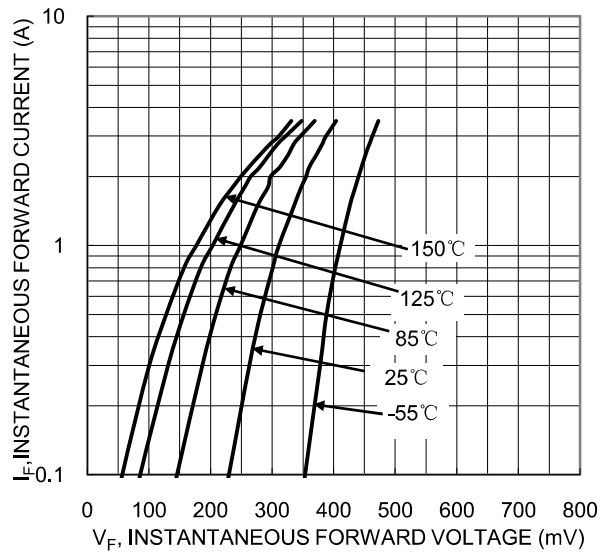


Figure 1. Typical Forward Characteristics

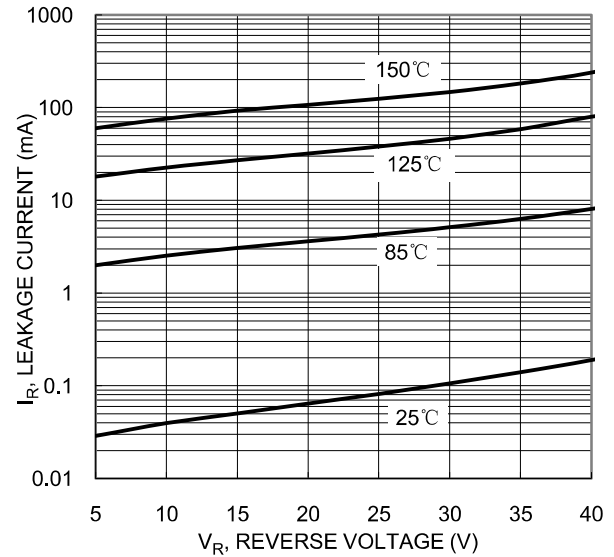


Fig.2 Typical Reverse Characteristics

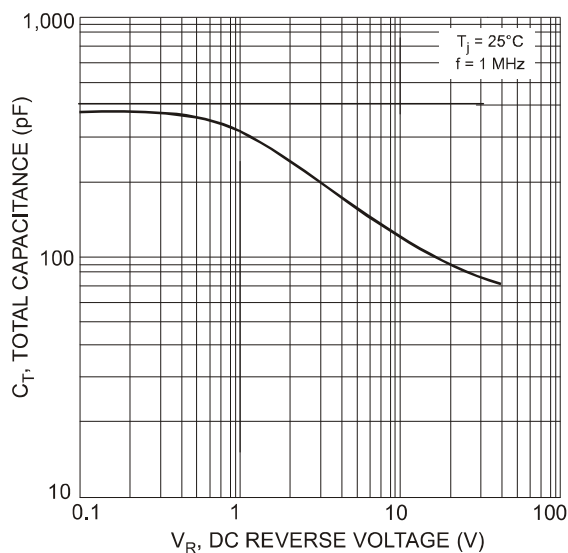


Fig. 3 Total Capacitance vs. Reverse Voltage

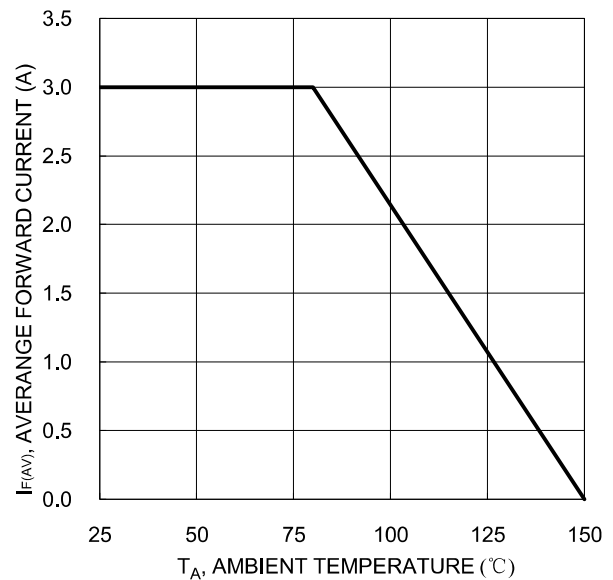


Figure 4. DC Forward Current Derating

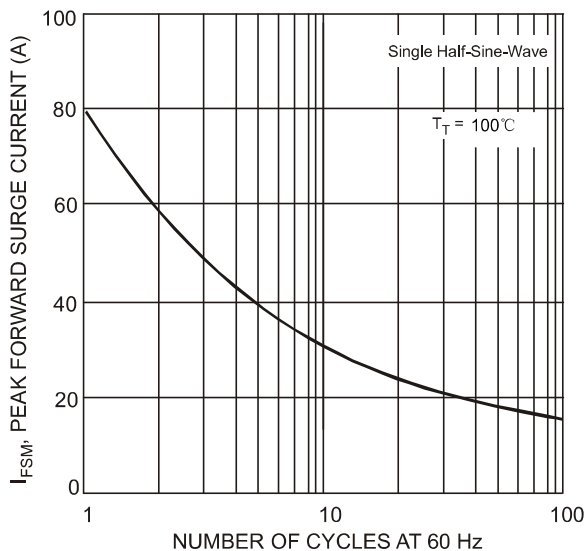


Fig. 5 Max Non-Repetitive Peak Forward Surge Current

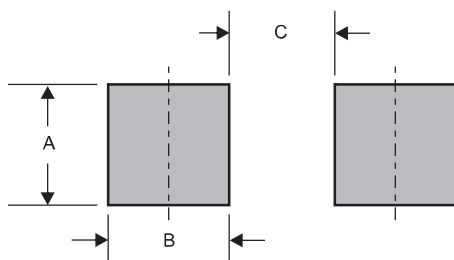
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
STPS2L30A-FS	A34

Suggested solder pad layout

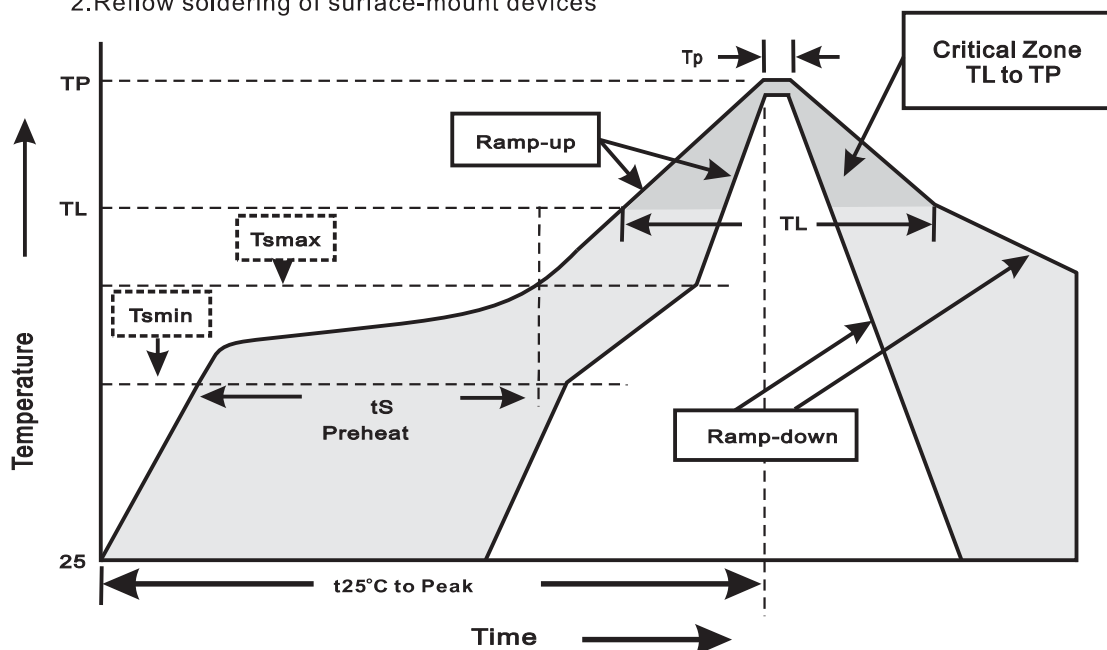


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMA	0.110 (2.80)	0.063 (1.60)	0.087 (2.20)

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes