

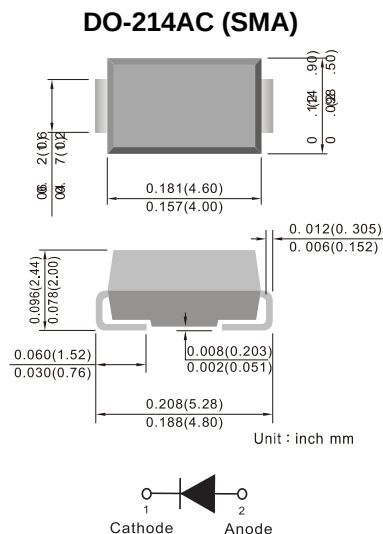
Surface Mount Rectifier Diode

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- AEC-Q101 qualified
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Data

- Package: SMA/DO-214AC
- Terminals: Tin plated leads, solderable per
- Polarity: Cathode line denotes the cathode end



Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	S2AAQ	S2BAQ	S2DAQ	S2GAQ	S2JAQ	S2KAQ	S2MAQ
Maximum Repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC Blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I_O	A	2						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_J=25^\circ\text{C}$	I_{FSM}	A	50						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_J=25^\circ\text{C}$			100						
Current squared time @1ms≤t≤8.3ms $T_J=25^\circ\text{C}$	I^2t	A ² s	10.735						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_J	°C	-55 ~ +150						

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

Parameter	Symbol	Unit	Test Conditions	S2AAQ	S2BAQ	S2DAQ	S2GAQ	S2JAQ	S2KAQ	S2MAQ
Maximum instantaneous forward voltage	V_F	V	$I_{FM}=2.0A$	1.1						
Maximum DC reverse current at rated DC blocking voltage	I_R	μA	$T_J=25^\circ\text{C}$	5						
			$T_J=125^\circ\text{C}$	100						
Typical junction capacitance	C_j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	12						



Thermal Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	S2AAQ	S2BAQ	S2DAQ	S2GAQ	S2JAQ	S2KAQ	S2MAQ
Typical Thermal Resistance	$R_{\theta J-A}^{(1)}$	$^{\circ}\text{C/W}$	65						
	$R_{\theta J-L}^{(1)}$		20						
	$R_{\theta J-C}^{(1)}$		18						

Note

(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

Characteristics (Typical)

FIG.1: I_o -TL Curve

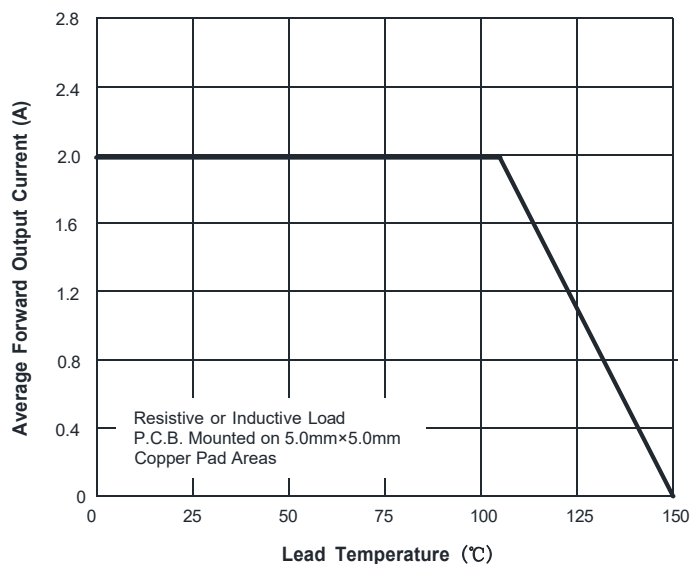


FIG.2: Forward Surge Current Capability

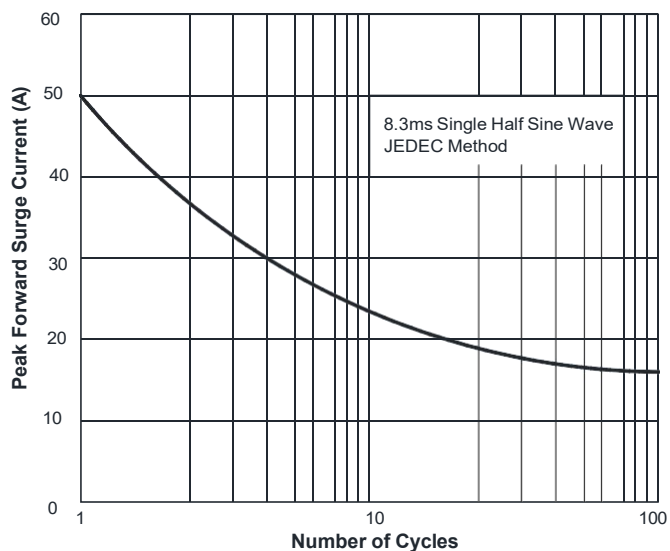


FIG.3: Typical Forward Voltage

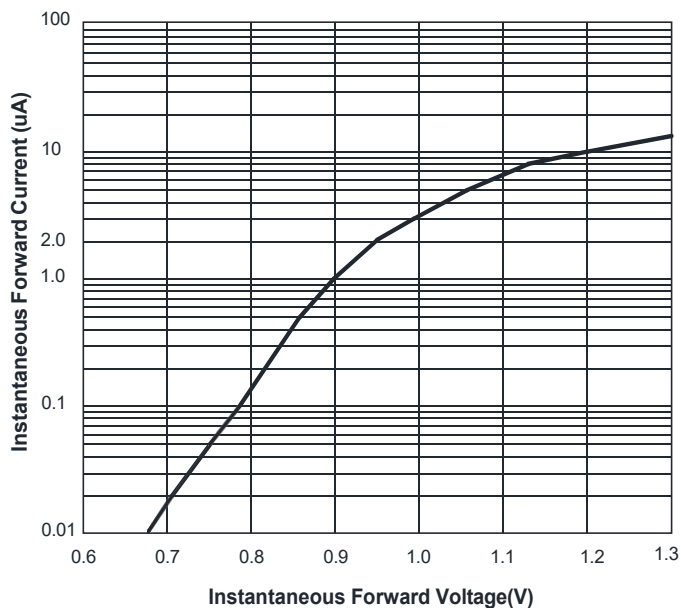


FIG.4: Typical Reverse Characteristics

