

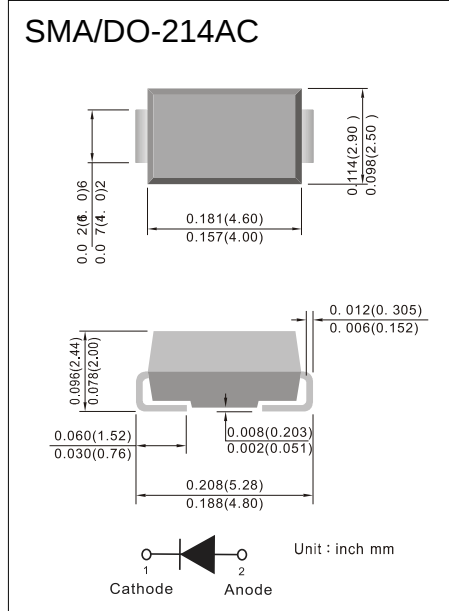
Surface Mount Schottky Barrier Diode

Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- AEC-Q101 qualified
- Compliant with RoHS standards, halogen-free

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	SS								
			52AQ	53AQ	54AQ	55AQ	56AQ	58AQ	510AQ	515AQ	520AQ
Repetitive peak reverse voltage	V_{RRM}	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, resistance load, TL (FIG.1)	I_O	A	5.0								
Surge(non-repetitive)forward current @ 60Hz half-sine wave,1 cycle, $T_A=25^{\circ}\text{C}$	I_{FSM}	A	150								
Storage temperature	T_{stg}	$^{\circ}\text{C}$	-55 ~+150								
Junction temperature	T_J	$^{\circ}\text{C}$	-55 ~+150						-55 ~+175		

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

Parameter	Symbol	Unit	Test Conditions	SS								
				52AQ	53AQ	54AQ	55AQ	56AQ	58AQ	510AQ	515AQ	520AQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =5.0A	0.55			0.70		0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage per diode@ V _{RM} =V _{RRM}	I _{RRM}	mA	Ta=25°C	0.5					0.1			
			Ta=100°C	10					5			

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

Parameter	Symbol	Unit	SS								
			52AQ	53AQ	54AQ	55AQ	56AQ	58AQ	510AQ	515AQ	520AQ
Thermal resistance	R _{θJ-A}	°C/W	60 ¹⁾								
	R _{θJ-L}		22 ¹⁾								

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)

FIG1: I_o -TL Curve

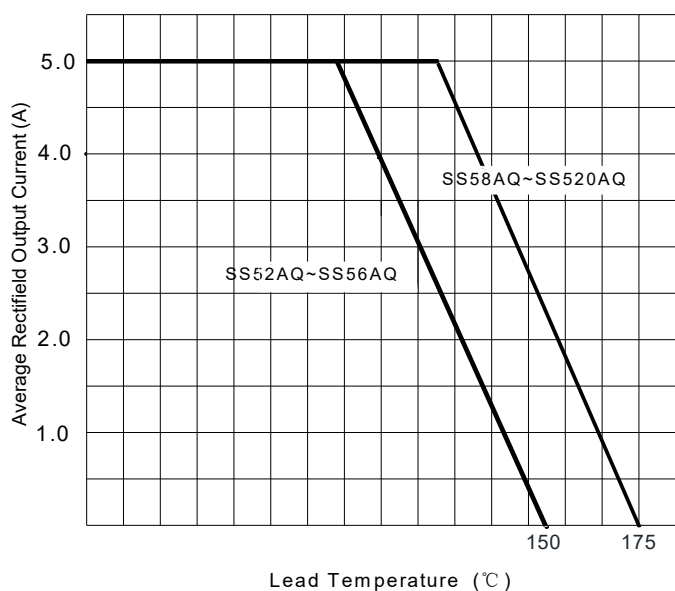


FIG2: Surge Forward Current Capability

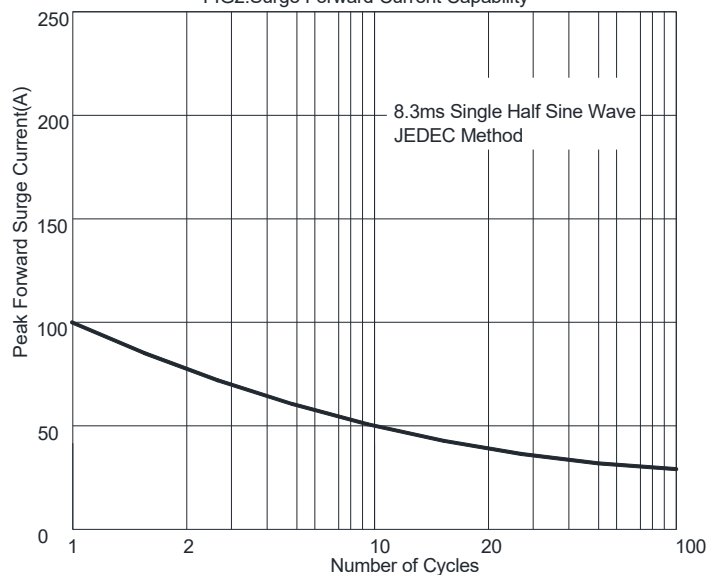


FIG.3: TYPICAL FORWARD CHARACTERISTICS

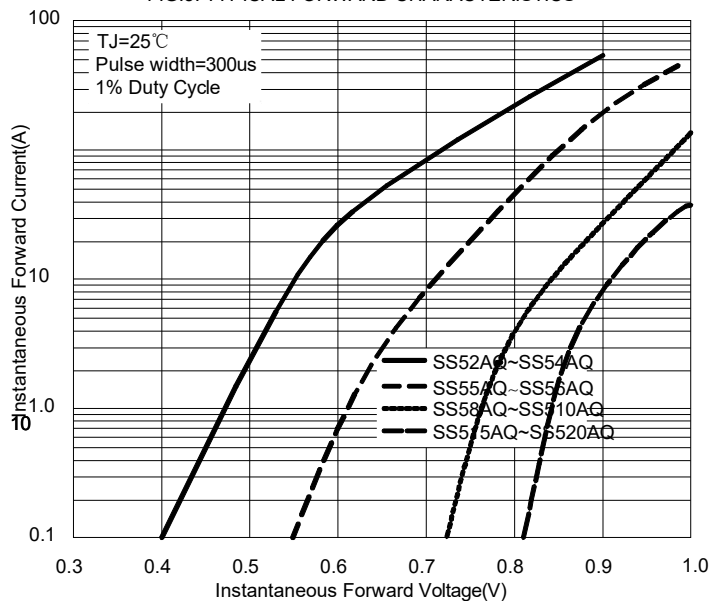


FIG4: Typical Reverse Characteristics

