

5A, 50V~1000V Surface Mount Rectifier

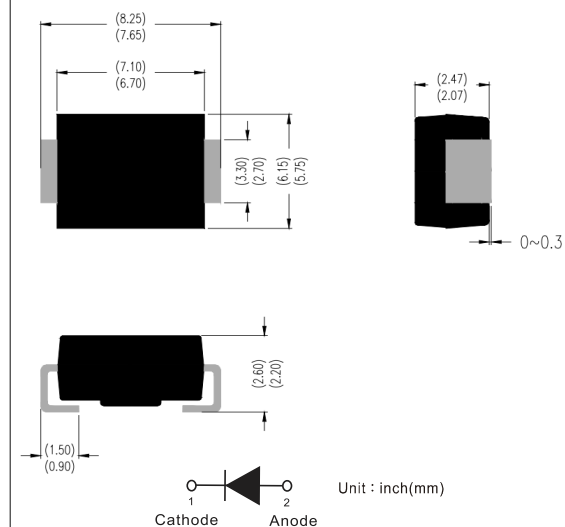
Features

- Glass passivated junction chip
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- Comply with RoHS standard, halogen-free

Mechanical Data

- package: SMC/DO-214AB
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any

SMC/DO-214AB



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

Parameter	Symbol	Unit	S5AC	S5BC	S5DC	S5GC	S5JC	S5KC	S5MC
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	5.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_J=25^\circ\text{C}$	I_{FSM}	A	150						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_J=25^\circ\text{C}$			300						
Current squared time @1ms≤t≤8.3ms $T_J=25^\circ\text{C}$	I^2t	A ² s	94						
Storage Temperature	T_{stg}	°C	-55 ~ +150						
Junction Temperature	T_J	°C	-55 ~ +150						

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

Parameter	Symbol	Unit	Test Conditions	S5AC	S5BC	S5DC	S5GC	S5JC	S5KC	S5MC
Maximum instantaneous forward voltage	V_F	V	$I_{FM}=5.0\text{A}$	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	33						

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

Parameter	Symbol	Unit	S5AC	S5BC	S5DC	S5GC	S5JC	S5KC	S5MC
Typical Thermal resistance	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	48						
	$R_{\theta J-L}$		15						
	$R_{\theta J-C}$		12						

Note(1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas



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

FIG.1: I_o - T_L Curve

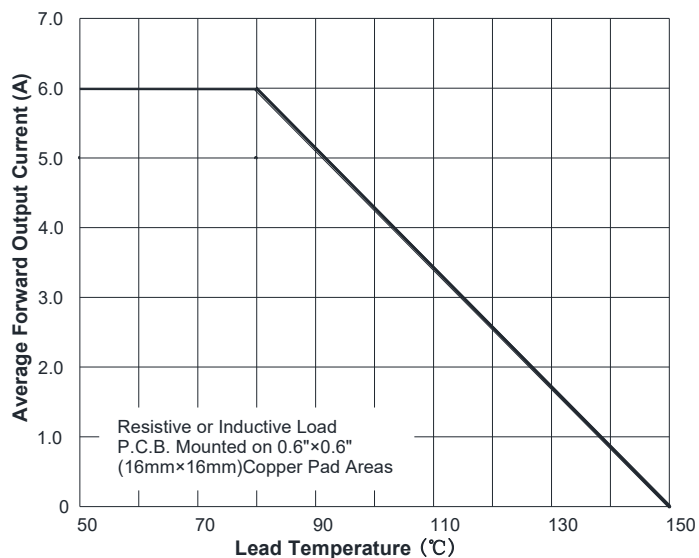


FIG.2: Forward Surge Current Capability

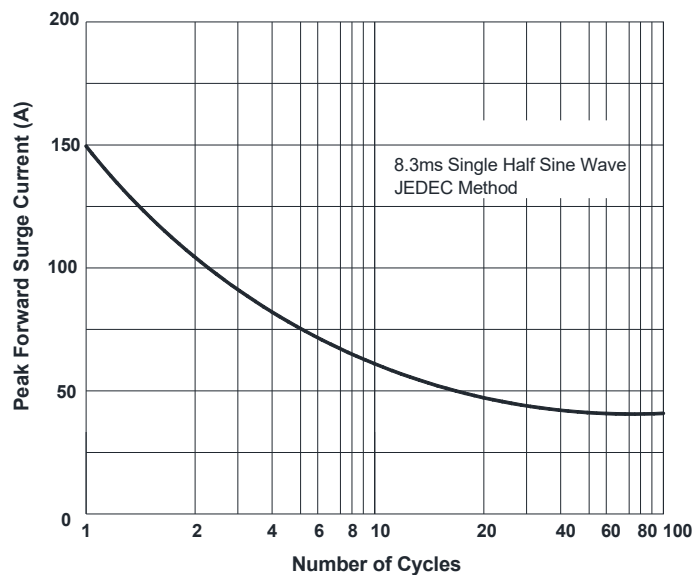


FIG.3: Typical Forward Voltage

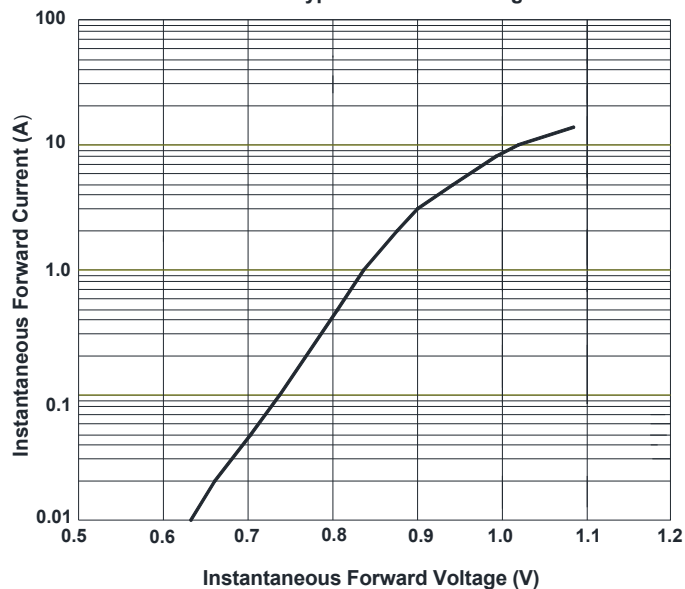


FIG.4: Typical Reverse Characteristics

