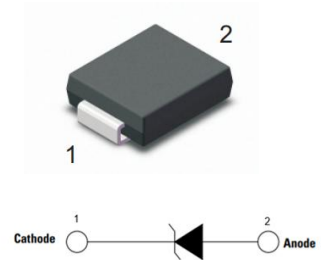


Features

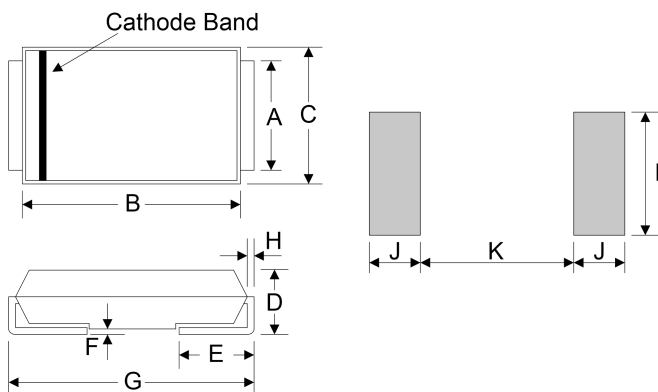
- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Low forward voltage drop
- ◆ Low leakage current
- ◆ High forward surge capability
- ◆ Meets MSL level 1, per J-STD-020,
- ◆ Plastic package has underwriters laboratory flammability 94V-0
- ◆ Polarity: color band denotes cathode end



Applications

- ◆ Low voltage high frequency inverters
- ◆ DC/DC converters
- ◆ Freewheeling
- ◆ Polarity protection applications

Dimensions (DO-214AB/SMC)



Ref.	Millimeters		Inches	
	Min	Max	Min.	Max.
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.06	2.62	0.079	0.103
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	7.75	8.130	0.305	0.320
H	0.152	0.305	0.006	0.012
I	3.30	-	0.129	-
J	2.40	-	0.094	-
K	-	4.20	-	0.165

Maximum Ratings and Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	SS1040	SS1045	SS1060	SS10100	SS10150	SS10200	Unit
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	40	45	60	100	150	200	V
Maximum RMS Voltage	V _{RMS}	28	32	42	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	40	45	60	100	150	200	V
Maximum Average Forward Current	I _{F(AV)}	10.0						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	150						A
Max Instantaneous Forward Voltage at 10A	V _F	0.55		0.75	0.85	0.90	0.92	V
Maximum DC Reverse Current at Rated DC Reverse Voltage	I _{R @25℃}	0.5						mA
	I _{R@100℃}	50						
Typical Thermal resistance	R _{θJA}	60						℃/W
Typical Junction Capacitance (f=1MHz, V _R =4V)	C _J	800		600				pF
Junction temperature	T _j	-55~+150						℃
Storage temperature	T _{stg}	-55 ~+150						℃

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

Figure 1. Typical Forward Current Derating Curve

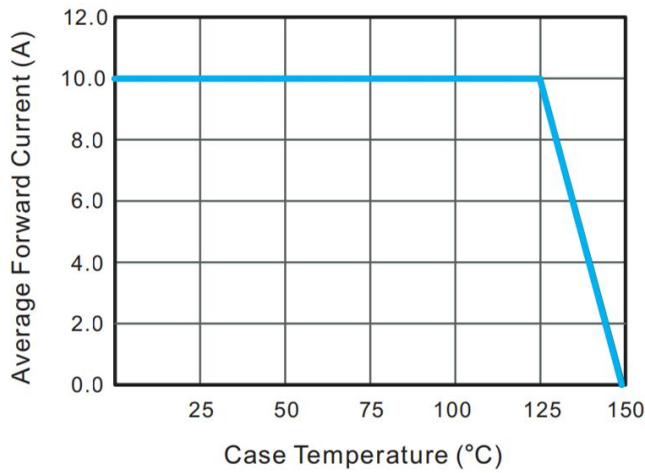


Figure 2. Typical Reverse Characteristics

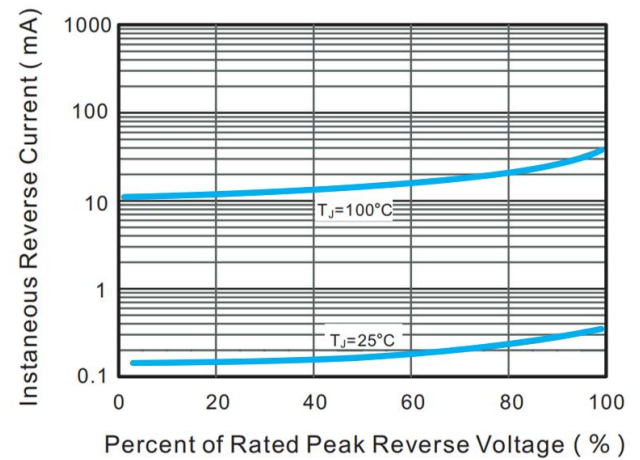


Figure 3. Typical Forward Characteristic

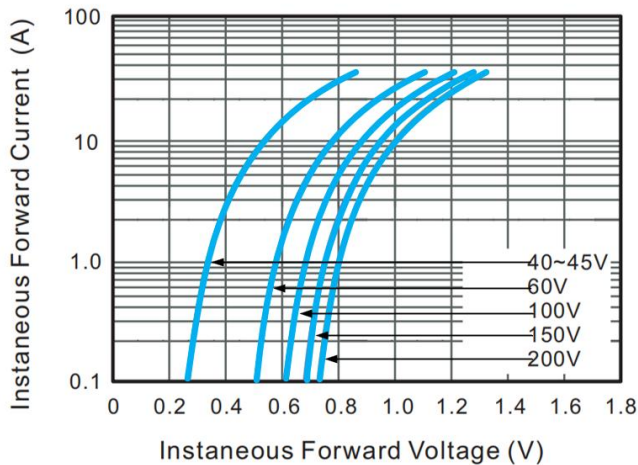


Figure 4. Typical Junction Capacitance

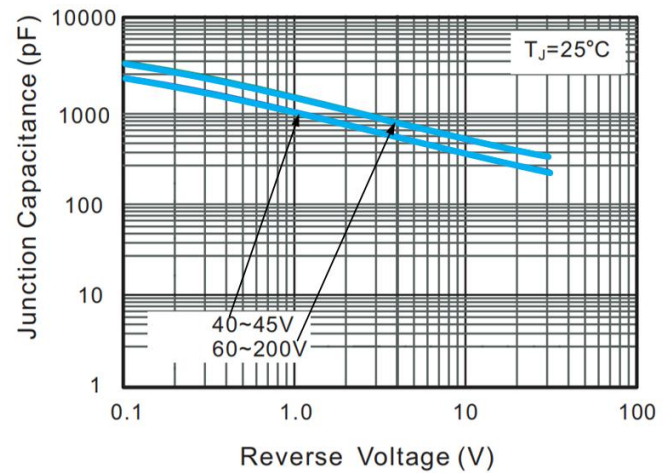


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

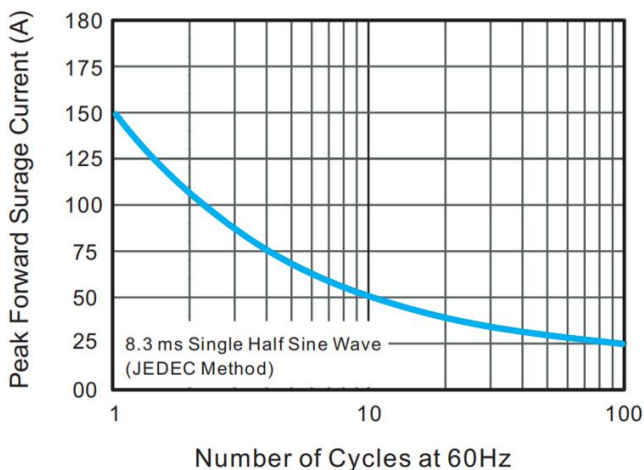
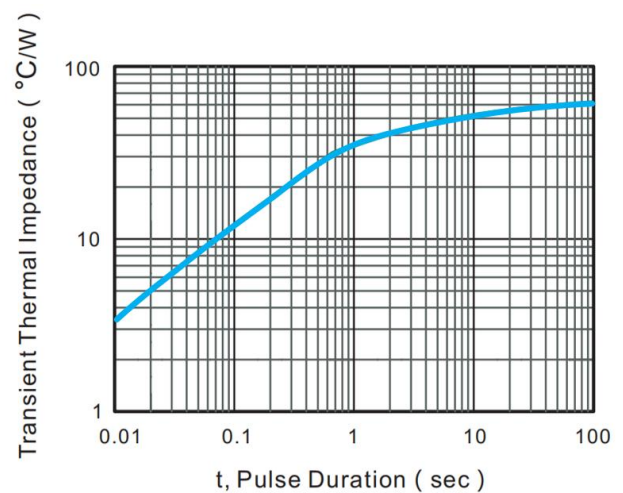
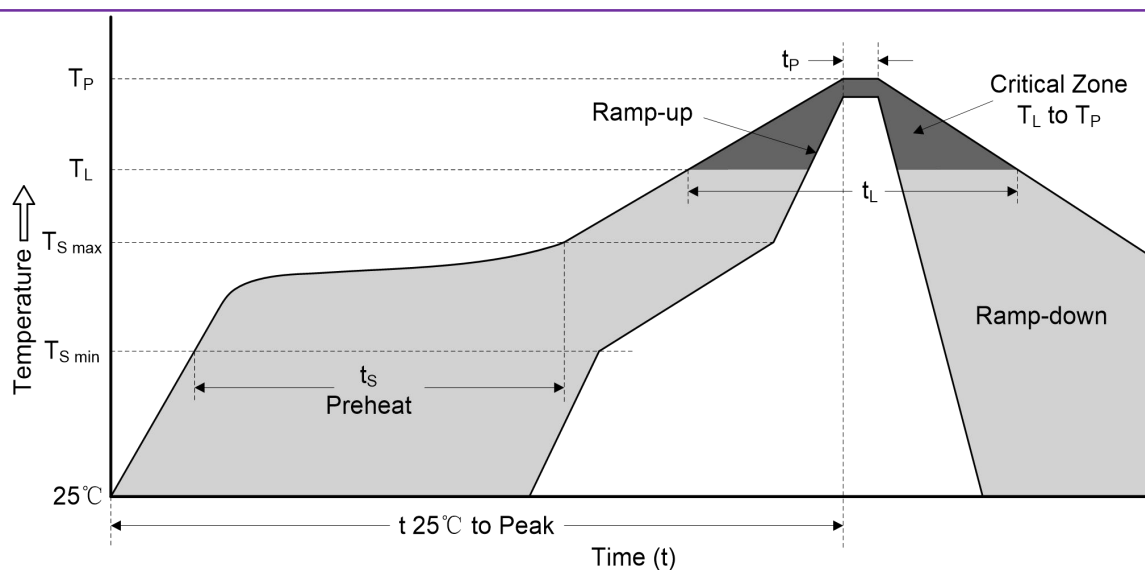


Figure 6. Typical Transient Thermal Impedance



Reflow Soldering Parameters



Reflow Condition		Lead-free Assembly
Preheat	-Temperature Min ($T_{S\ min}$)	150°C
	-Temperature Max ($T_{S\ max}$)	200°C
	-Time (min to max) (t_s)	60-180 seconds
Average ramp-up rate (T_L to T_P)		3°C/second max.
$T_{S\ max}$ to T_L -Ramp-up Rate		3°C/second max.
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Time (min to max) (t_s)	60-150 seconds
Peak Temperature (T_P)		260(+0/-5)°C
Time within 5°C of actual Peak Temperature (t_p)		20-40 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to Peak Temperature(T_P)		8 minutes max.
Do not exceed		260°C