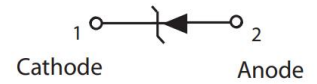


Features

- ◆ 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
- ◆ Plastic package has underwriters laboratory flammability 94V-0
- ◆ Polarity: Color band denotes cathode end



Applications

- ◆ Low voltage, high frequency inverters
- ◆ Free wheeling
- ◆ Polarity protection applications

Dimensions (DO-214AC/SMA)

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.250	1.650	0.049	0.065
B	3.990	4.550	0.157	0.178
C	2.540	2.790	0.100	0.110
D	1.980	2.290	0.078	0.090
E	0.780	1.550	0.030	0.061
F	-	0.203	-	0.008
G	4.75	5.280	0.194	0.208
H	0.152	0.305	0.006	0.012
I	1.800	-	0.070	-
J	2.100	-	0.082	-
K	-	2.300	-	0.090

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

Parameter	Symbol	SS								Unit
		12	14	16	18	110	112	115	120	
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V
Maximum DC blocking voltage	$V_{(AV)}$	20	40	60	80	100	120	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25								A
Maximum instantaneous forward voltage at 1.0A	V_F	0.55		0.70		0.85		0.90		V
Maximum DC reverse current at rated DC blocking voltage	$I_R@25^{\circ}\text{C}$	0.3			0.2			0.1		mA
	$I_R@100^{\circ}\text{C}$	10.0			5.0			2		
Typical junction capacitance(Note1)	C_J	110			80					pF
Typical thermal resistance(Note 2)	$R_{\theta JA}$	90								$^{\circ}\text{C}/\text{W}$
Operating junction temperature range	T_J	-55+125								$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55+150								$^{\circ}\text{C}$

Notes: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

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

Figure 1. Forward Current Derating Curve **Figure 2. Typical Reverse Characteristics**

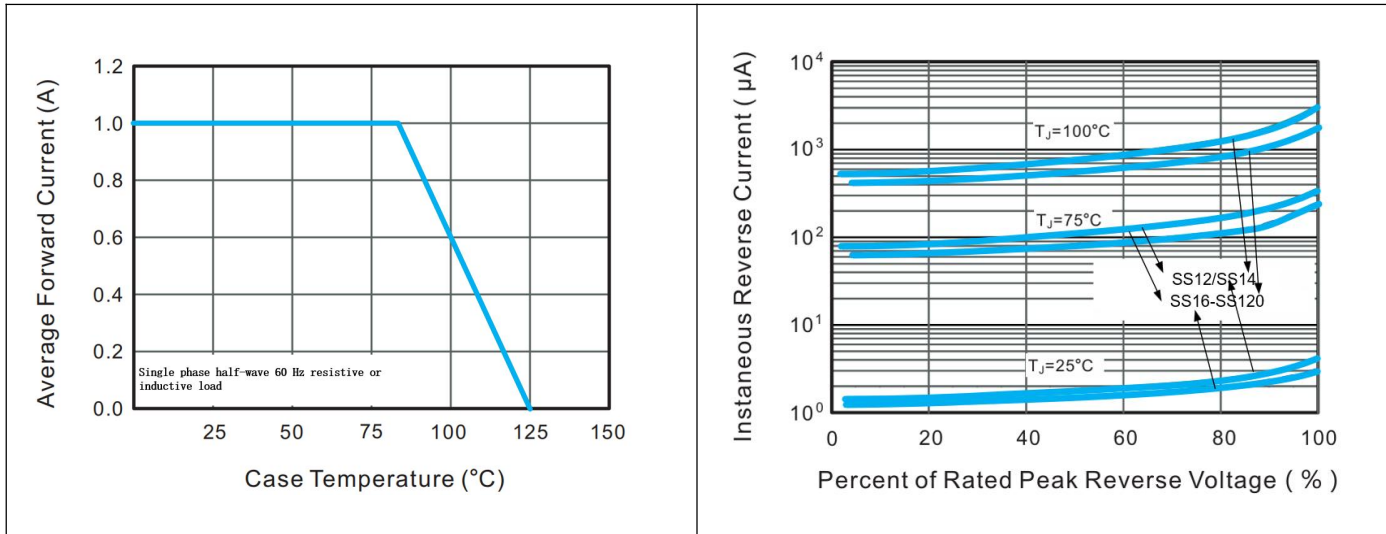


Figure 3. Typical Forward Characteristic **Figure 4. Typical Junction Capacitance**

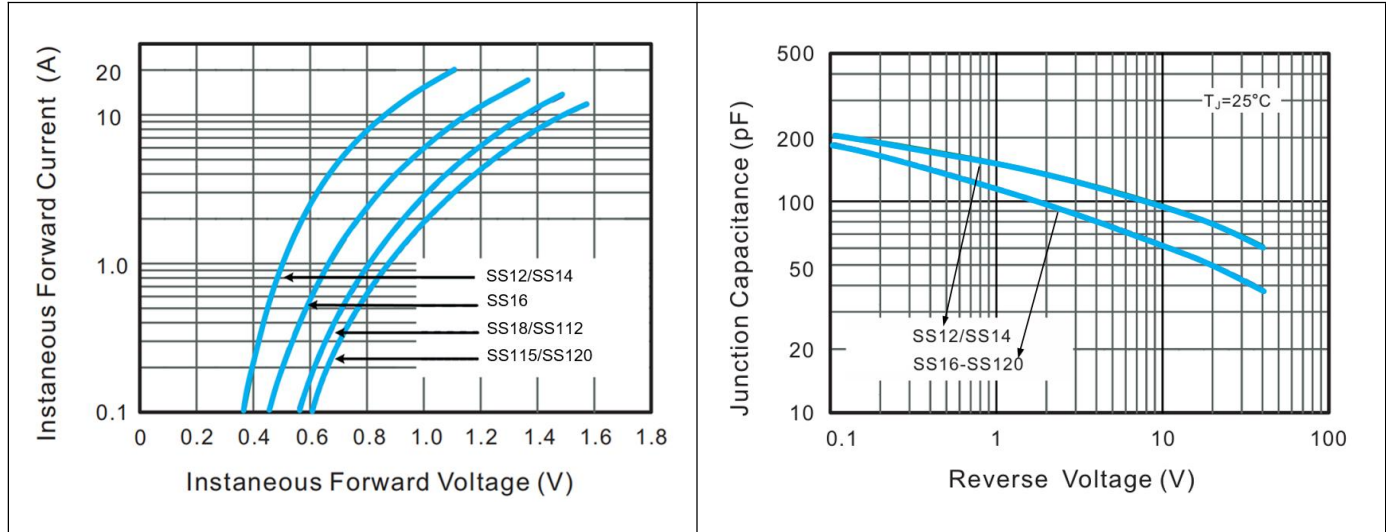
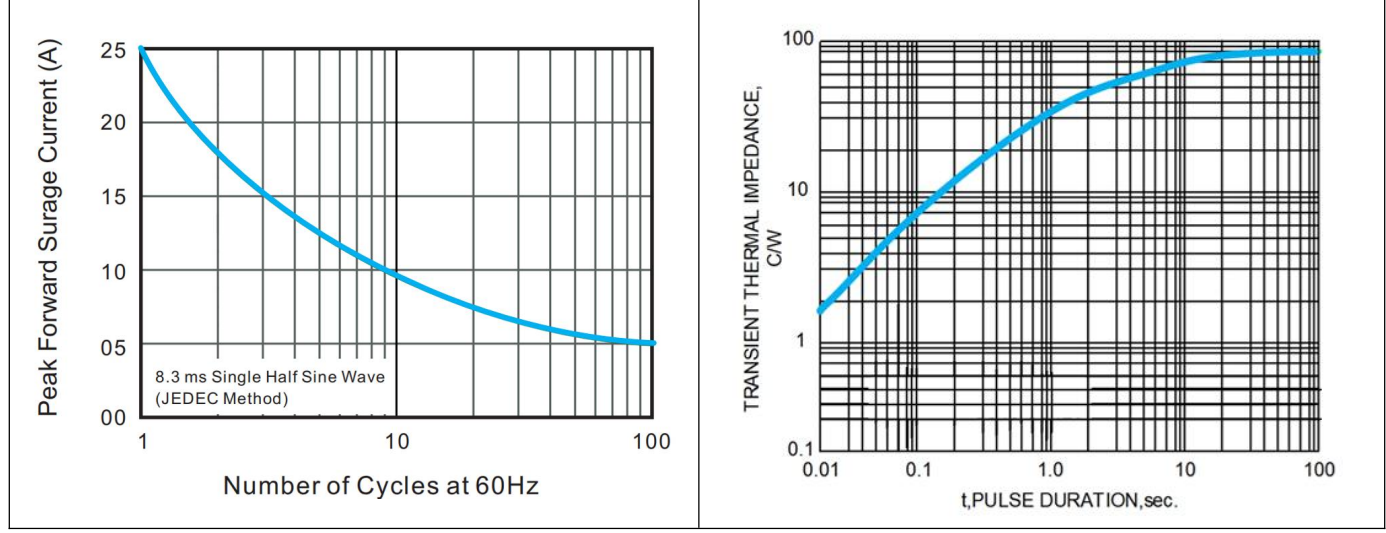
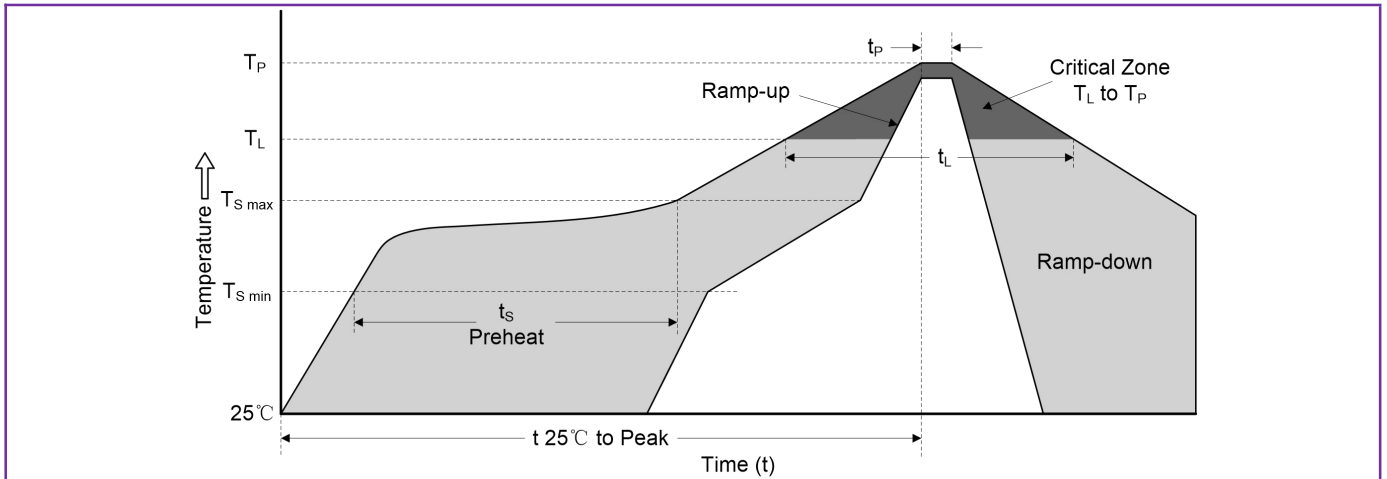


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current **Figure 6. Typical Transient Thermal Impedance**



Reflow Soldering Parameters



Reflow Condition		Lead-free Assembly
Pre heat	-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)		$3^\circ\text{C}/\text{second max.}$
$T_{S\ max}$ to T_L -Ramp-up Rate		$3^\circ\text{C}/\text{second max.}$
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Time (min to max) (t_s)	60-150 seconds
Peak Temperature (T_P)		$250(+0/-5)^\circ\text{C}$
Time within 5°C of actual Peak Temperature (t_p)		10 seconds Max
Ramp-down Rate		$6^\circ\text{C}/\text{second max.}$
Time 25°C to Peak Temperature(T_p)		8 minutes max.
Do not exceed		260°C