Table 1. ABSOLUTE MAXIMUM RATINGS Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value			Unit
		SS13HE	SS14HE, SASS14HE	SS16HE	
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	30	40	60	V
V_R	Reverse Voltage	30	40	60	V
$I_{F(AV)}$	Maximum Average Forward Rectified Current	1			A
I_{FSM}	Peak Forward Surge Current: 8.3 ms Single Half Sine−Wave Superimposed on Rated Load	25			A
T_J	Operating Junction Temperature Range	−55 to +150			°C
T_{STG}	Storage Temperature Range	−55 to +150			°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

Table 2. THERMAL CHARACTERISTICS (Note 1) Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
Ψ_{JL}	Junction−to−Lead Thermal Resistance Thermocouple Soldered to Cathode	21	°C/W
$R_{\theta JA}$	Junction−to−Ambient Thermal Resistance (Note 1)	199	°C/W

1. Per JESD51−3 Recommended Thermal Test Board. Device mounted on FR−4 PCB, board size = 76.2 mm x 114.3 mm

Table 3. ELECTRICAL CHARACTERISTICS Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V_F	Instantaneous Forward Voltage (Note 2)	I_F = 0.5 A, T_J = 25°C	SS13HE, SS14HE, SASS14HE		0.41		V
		I_F = 0.5 A, T_J = 125°C			0.31		
		I_F = 1.0 A, T_J = 25°C			0.46	0.55	
		I_F = 1.0 A, T_J = 125°C			0.40	0.50	
		I_F = 0.5 A, T_J = 25°C	SS16HE		0.51		
		I_F = 0.5 A, T_J = 125°C			0.45		
		I_F = 1.0 A, T_J = 25°C			0.61	0.68	
		I_F = 1.0 A, T_J = 125°C			0.54	0.60	
I_R	Reverse Current at Rated V_R	T_J = 25°C	SS13HE, SS14HE, SASS14HE		5.0	50	μA
		T_J = 125°C			3.0	10	mA
		T_J = 25°C	SS16HE		2.0	50	μA
		T_J = 125°C			1.5	10	mA
T_{rr}	Reverse Recovery Time	I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	SS13HE, SS14HE, SASS14HE		5.6		ns
			SS16HE		8.3		
C_J	Junction Capacitance	V_R = 4.0 V, f = 1 MHz	SS13HE, SS14HE, SASS14HE		55		pF
			SS16HE		43		

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

2. Pulse test with PW = 300 μs, 1% duty cycle

TYPICAL PERFORMANCE CHARACTERISTICS

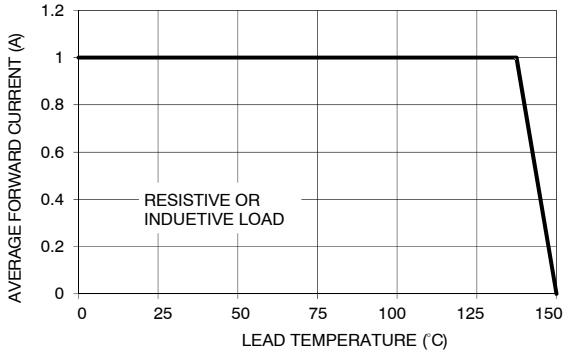

Figure 1. Forward Current Derating Curve

Figure 2. Maximum Non−Repetitive Forward Surge Current

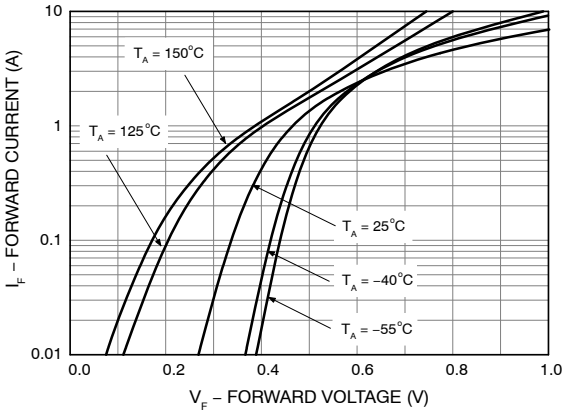

Figure 3. Typical Forward Characteristics – SS13HE / SS14HE

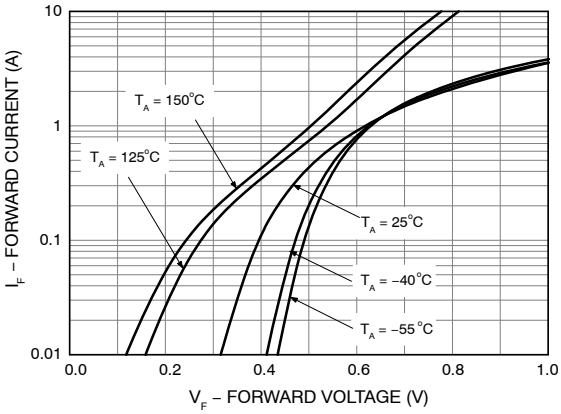

Figure 4. Typical Forward Characteristics – SS16HE

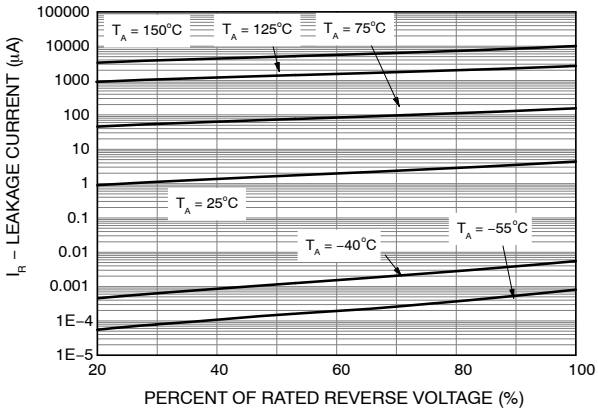

Figure 5. Typical Reverse Characteristics – SS13HE / SS14HE

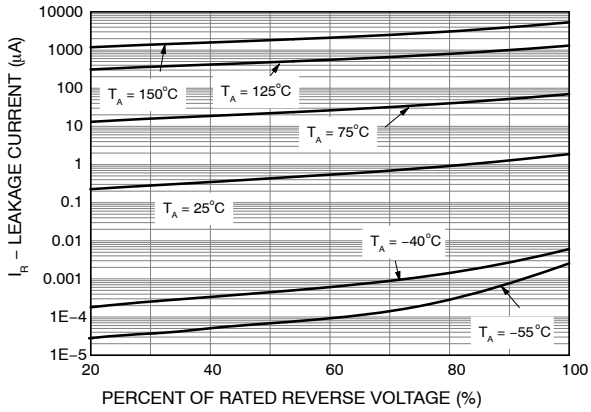

Figure 6. Typical Reverse Characteristics – SS16HE

TYPICAL PERFORMANCE CHARACTERISTICS

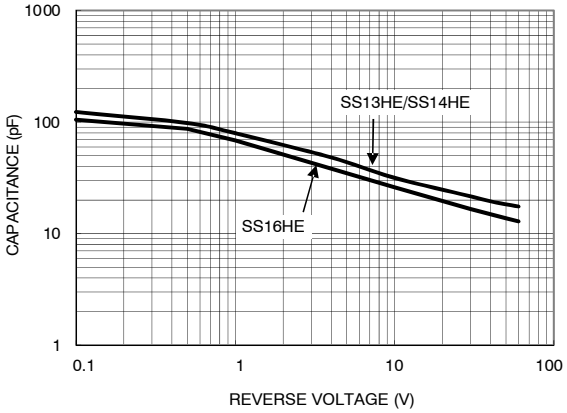

Figure 7. Typical Junction Capacitance

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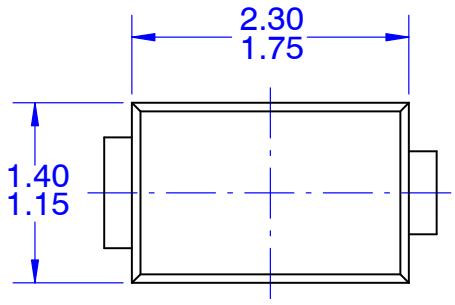
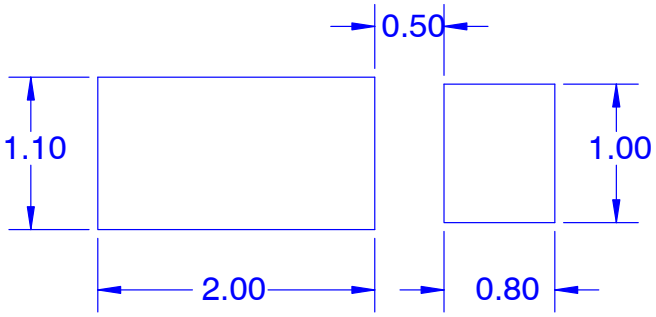
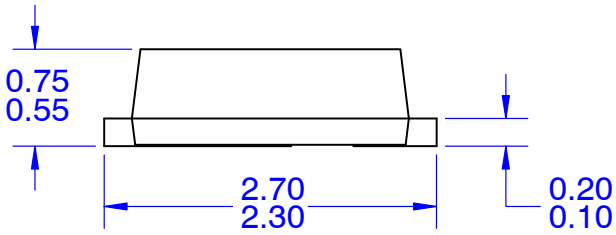


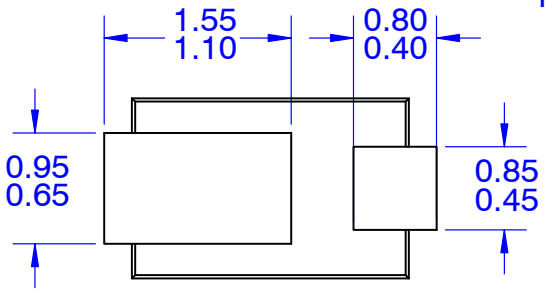
TOP VIEW



LAND PATTERN RECOMMENDATION



FRONT VIEW



BOTTOM VIEW

NOTES:

A. THIS PACKAGE DOES NOT CONFORM TO ANY STANDARDS.
B. ALL DIMENSIONS ARE IN MILLIMETERS.
C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.

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