

Reliability and Test Condition

Item	Performance	Test Condition
High Temperature Exposure	Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed. Inductance : Within $\pm 10\%$ of initial value. Hi-Pot : Shall compliance to test requirement stated.	MIL-STD-202 Method 108 Temperature: $125 \pm 2^\circ\text{C}$ Duration : 1000hrs Measured at room temperature after placing for 24 ± 4 hrs
Temperature Cycling		JESD22 Method JA-104 Step1 : $-40 \pm 2^\circ\text{C}$ 30min Min. Step2 : Transition time 1min Max. Step3 : $125^\circ\text{C} \pm 2^\circ\text{C}$ 30min Min. Step4 : Transition time 1min Max. Number of cycles : 1000 Measured at room temperature after placing for 24 ± 2 hrs
Biased Humidity		MIL-STD-202 Method 103 Humidity : $85 \pm 3\%$ R.H Temperature : $105^\circ\text{C} \pm 2^\circ\text{C}$ Duration : 1000hrs Measured at room temperature after placing for 24 ± 2 hrs
Operation Life		MIL-PRF-27 Temperature : $105^\circ\text{C} \pm 2^\circ\text{C}$ Duration : 1000hrs with 100% rated current Measured at room temperature after placing for 24 ± 2 hrs
External Visual		MIL-STD-883 Method 2009 Visual Inspection
Physical Dimension	Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed.	JESD22 Method JB-100 Measured according to the product specification
Terminal Strength		MIL-STD-202 Method 211 Applied force: 1.5kg-mm min. Duration : 5 to10 sec



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Resistance to Solvents	Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed.	MIL-STD-202 Method 215 Add aqueous wash chemical - OKEM clean or equivalent.												
Resistance to Soldering Heat	Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed. Hi-Pot : Shall compliance to test requirement stated.	<table border="1"> <thead> <tr> <th colspan="4" data-bbox="1059 461 1469 510">MIL-STD-202 Method 210</th> </tr> <tr> <th data-bbox="1059 510 1163 651">Temp (°C)</th> <th data-bbox="1163 510 1240 651">Time (s)</th> <th data-bbox="1240 510 1374 651">Temp ramp</th> <th data-bbox="1374 510 1469 651">No. of heat cycles</th> </tr> </thead> <tbody> <tr> <td data-bbox="1059 651 1163 748">260 ±5</td> <td data-bbox="1163 651 1240 748">10 ±1</td> <td data-bbox="1240 651 1374 748">25mm/s ±6 mm/s</td> <td data-bbox="1374 651 1469 748">1</td> </tr> </tbody> </table>	MIL-STD-202 Method 210				Temp (°C)	Time (s)	Temp ramp	No. of heat cycles	260 ±5	10 ±1	25mm/s ±6 mm/s	1
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Solderability	Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed. More than 95% of the terminal electrode should be covered with solder。 (Magnification 50X)	J-STD-002 Steam Aging: 8 hours ± 15 min Preheat: 150°C, 60sec. Solder: Sn99.5%-Cu0. 5% Temperature: 235 ± 5°C Flux for lead free: Rosin. 9.5% Dip time: 4 ±1sec. Depth: completely cover the termination.												
Electrical Characterization	Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed. Inductance : Within ±10% of initial value. Hi-Pot : Shall compliance to test requirement stated.	User Spec Humidity : 85 ± 3 % R.H Temperature : 105°C ± 2°C Duration : 1000hrs Measured at room temperature after placing for 24 ± 2 hrs												

