

## INDUSTRIAL LEVEL QUALIFICATION REQUIREMENTS FOR DISCRETE PRODUCT

Stress Test	Conditions	Duration	Sample Size <sup>1</sup>
Temperature Cycling (T/C)	- 55 °C to 150 °C, 30 minutes Dwell	1000 cycles	3 lots x 77 devices
Temperature and Humidity Bias (H3TRB)	85 °C/85%RH @ 80% of Max VDSS/VCES/VR up to 100V	1000 hours	3 lots x 77 devices
High Temperature Reverse Bias (HTRB)	T <sub>j</sub> =125 °C to 175 °C @ 80% of Max VDSS/VCES/VR	1000 hours	3 lots x 77 devices
High Temperature Gate Bias (HTGB)	T <sub>j</sub> =150 °C or 175 °C @ 80% of Max VGSS	1000 hours	3 lots x 77 devices
Intermittent Operating Life (IOL) or Power Cycling (PC)	ΔT <sub>j</sub> of 100 °C, 2 min On/Off 3.5 min On/Off 5 min On/Off	15,000/8,572/6,000 cycles Package size dependent	3 lots x 77 devices
Unbiased Autoclave (A/C)	121 °C/15 PSIG/100%RH	96 hours	3 lots x 77 devices

Note: Family data may be used to qualify one or more products.

<sup>1</sup>= Number of lots may be reduced to 1 after product family is qualified.

### PRECONDITIONING REQUIREMENTS

MSL-1 preconditioning is required for surface mount capable devices that are put on Temperature Cycling, H3TRB, IOL, and Autoclave tests. If straight leaded devices (such as I-PAK or TO-262) are used, then the devices are required to undergo the preconditioning with a third reflow exposure in lieu of the surface mounting step.

### PASS/FAIL CRITERIA

Electrical parameters must not exceed the datasheet limits.