

**AN0031**  
**HR (High Reliability and Space Level Product)**  
**Working Reference Sheet for Quotations**  
Lead Time Chart, Sample Required Reference Table, Testing Procedures

Release 02/15/18

EMC High Reliability and S-level products are being offered with standardized lead-times. Use Table I below.

**Table I: High Reliability Lead-Times**

HR03/HR05/HR09/HRKFA with Group A	12 Weeks ARO
HR03/HR05/HR09/HRKFA with Group B	18 Weeks ARO
HR03/HR05/HR09/HRKFA with Group C	20 Weeks ARO
HRT/HRM/HRW/HRK with Group A	12 Weeks ARO
HRT/HRM/HRW/HRK with Group B	18 Weeks ARO
HRT/HRM/HRW/HRK with Group C	20 Weeks ARO

When customers purchase High Reliability or S-level products, they will designate whether Group A, B, or C is required. When entering an order, the following additional line items will be required.

**Table II: Sample Line Items Required @ unit price on the purchase order.**

	HR03/HR05/HR09/HRKFA	HRT/HRM/HRW/HRK
<b>Group A Total</b>	<b>None</b>	<b>3 TCA Samples</b>
Group B		
Sub-group 1	Add 3 samples	Add 3 Samples
Sub-group 2	Add 4 Samples Burn-In	Add 4 Samples Burn-In
<b>Group A &amp; B Total</b>	<b>7 Samples</b>	<b>10 Samples</b>
Group C	Add 4 Samples for Stepped Burn-In	Add 4 Samples for Stepped Burn-In
<b>Group A, B &amp; C Total</b>	<b>11 Samples</b>	<b>14 Samples</b>

All sample line items should be entered separately onto the factory order immediately after the corresponding HR line item at the unit price based on the total quantity purchased per value. These items must appear on any quotations and on any purchase orders received from the customer.



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## HR03/HR05/HR09/HRT/HRM/HRW series

### Group A samples:

TCA destruct samples will be shipped separately in a waffle pack marked "TCA Samples".

### Group B Samples:

3 Test Samples for Group B sub-group 1 will be shipped in a waffle pack marked "Group B, subgroup 1 Samples".

4 Burn-In Samples for Group B sub-group 2 will be shipped in a waffle pack marked "Group B, subgroup 2 Life Test Samples 1000 hour Burn-In @ 70 deg. C".

### Group C Samples

4 Qualification Samples for Group C will be shipped in a waffle pack marked "Group C Qualification Samples 1000 hour Stepped Burn-in (250 hrs/500 hrs/750 hrs/1000 hrs) @ 125 deg C".

Use Table III below for a reference showing what tests are included when requesting Group A, B, or C designators.

<b>Table III: Testing Procedures to be Included (TP-8965 and TP-9030) HR03/HR05/HR09/HRT/HRM/HRW series</b>			
	Group A	Group B	Group C
Pre-Cap Inspection	✓	✓	✓
Initial RF Testing	✓	✓	✓
Visual Mechanical	✓	✓	✓
Thermal Shock	✓	✓	✓
After Thermal Shock (ATS) RF Testing	✓	✓	✓
168 Hour Burn-In	✓	✓	✓
After Burn-In (ABI) Final RF Testing	✓	✓	✓
PDA % RF Test Comparison	✓	✓	✓
TCA Testing	HRT, HRM & HRW only	HRT, HRM & HRW only	HRT, HRM & HRW only
Low Temperature Operation		✓	✓
After Low Temperature Operation RF Testing		✓	✓
High Temperature Bake		✓	✓
Terminal Adhesion Test		✓	✓
Bondability Test		WB1, WB2 & G only	WB1, WB2 & G only
Solderability Test		✓	✓
Pre Burn-In (PBI) RF Testing		✓	✓
Life Test 1000 hour Burn-In		✓	✓
After Burn-In Life Test (ABIL) RF Test			✓
Pre-Qual. Burn-In (QBI) RF Test			✓
Qualification 1000 hour Stepped Pulse Burn-In			✓
After Qual. Burn-In (AQBI) RF Testing			✓

Samples and lot data can be retained at EMC rather than shipped for 5 years for a single data retention fee of \$500 or sample retention fee of \$1,000. Customized SCDs can be provided with Customer Cr



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## HRKFA/HRK series

### Group A samples:

TCA destruct samples will be shipped separately in a waffle pack marked "TCA Samples".

### Group B Samples:

3 Test Samples for Group B sub-group 1 will be shipped in a waffle pack marked "Group B, subgroup 1 Samples".

4 Burn-In Samples for Group B sub-group 2 will be shipped in a waffle pack marked "Group B, subgroup 2 Life Test Samples 1000 hour Burn-In @ 70 deg. C".

### Group C Samples

4 Qualification Samples for Group C will be shipped in a waffle pack marked "Group C Qualification Samples 1000 hour Stepped Burn-in @ 125 deg C".

Use Table III below for a reference showing what tests are included when requesting Group A, B, or C designators.

Table III: Testing Procedures to be Included (TP-9010) HRKFA/HRK series			
	Group A	Group B	Group C
Pre-Cap Inspection	✓	✓	✓
Initial RF Testing	✓	✓	✓
Visual Mechanical	✓	✓	✓
Thermal Shock	✓	✓	✓
After Thermal Shock (ATS) RF Testing	✓	✓	✓
168 Hour Burn-In/Bake	✓	✓	✓
After Burn-In (ABI) Final RF Testing	✓	✓	✓
PDA % RF Test Comparison	✓	✓	✓
TCA Testing	HRK only	HRK only	HRK only
High Temperature Bake		✓	✓
Terminal Adhesion Test		✓	✓
Bondability Test		Gold units only	Gold units only
Solderability Test		✓	✓
Pre Burn-In (PBI) RF Testing		✓	✓
Life Test 1000 hour Burn-In		✓	✓
After Burn-In Life Test (ABIL) RF Test			✓
Pre-Qual. Burn-In (QBI) RF Test			✓
Qualification 1000 hour Stepped Pulse Burn-In			✓
After Qual. Burn-In (AQBI) RF Testing			✓

Samples and lot data can be retained at EMC rather than shipped for 5 years for a single data retention fee of \$500 or sample retention fee of \$1,000. Customized SCDs can be provided with Customer Cr



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