Quality Grade Difference: MLCC

	TY Quality Grade 3	TY Qualit	y Grade 2	TY Quality Grade 1		
	S:General Application L:Medical GHTF A/B	B:Telecom and Industrial M:Medical GHTF C	C:Automotive Body Info JIS ver/AEC-Q200 ver	A :Automotive Powertrain and Safety		
Parts code	MSASE31LSB7475KTNA01 MLASE31LSB7475KTNA01 EMK316 B7475KL-T	MBASE31LAB7475KTNA18 MMASE31LAB7475KTNA18 EMK316AB7475KL8T	MCASE31LAB7475KTNA01 EMK316AB7475KLHT	MAASE31LAB7475KTNA01 EMF316AB7475KLHT		
AEC-Q200 Test Method	N,	/A	Qualified			
PPAP	N/A	Available upon request	Level $1{\sim}3$ Series Certification *	Level $1{\sim}5$ Item Certification *		
ISO9001 series		Cert	ified			
IATF16949	Produced at IATF16949 N/A authenticated factories (NON APQP)			IATF16949 confirmed (APQP)		
Plants		All Taiyo Yuden Plants				
Design for safety margin based on rated voltage	×1 ∼1.5		×2 ∼3.5			
Inspection process inline	Electric performance	+ Confirm durability on	safety margin ($\times 2 \sim 3.5$)	+CSR and HALT		
Temperature range	-55 to 85℃ (or 105/125℃)	-55 to (or 85	-55 to 125℃(150℃)			
Median Life @ Use70%RV 70℃	60years	328y	512years			
Fail in Time @ AEC- Q200 operating life	Max 2500	225^	Max 225			
Process control	Meeting Spec/Standard	Full Control of manufacturing process from start to end				
Process Line	Standard	Automotive Line and Designated Operator				

^{*} Note: AEC-Q200 is used as the specification of the stress test which is included in PPAP document for automotive grade.

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MLCC Spec Difference

	Conditions	TY Quality Grade 3		TY Quality Grade 2			
		S:General Application L:Medical GHTF A/B	B:Telecom and Industrial/ M:Medical GHTF C	C:Automotive Body Info JIS ver	C:Automotive Body Info AEC-Q200 ver	A :Automotive Powertrain and Safety	
Parts code			MBASE31LAB7475KTNA18 MMASE31LAB7475KTNA18 EMK316AB7475KL8T		MCASE31LAB7475KTNA01 EMK316AB7475KLHT	MAASE31LAB7475KTNA01 EMF316AB7475KLHT	
Operating life	Atmosphere		125℃ Dry		AEC-Q200 qualified	125℃ Dry	
	Electric stress		RV×1.5		AEC-Q200 qualified	RV×1	
	Duration		1000hours		AEC-Q200 qualified	1000hours	
Biased Humidity	Atmosphere	40℃ 95%RH	60℃ 9	95%RH	AEC-Q200 qualified	85℃ 85%RH	
	Electric stress	RV			AEC-Q200 qualified	RV	
	Duration	500 hours			AEC-Q200 qualified	1000 hours	
Heat Cycle	Atmosphere		-55℃ to 125℃		AEC-Q200 qualified	-55℃ to 125℃	
	Duration	5cycle	50c	ycle	AEC-Q200 qualified	1000cycle	
Board Flex		1mm			AEC-Q200 qualified	2mm	
Shear stress		0402(EIA) and larger: 5N 30秒 0201(EIA) and smaller: 2N 10秒			AEC-Q200 qualified	17.7 N 60sec 0402(EIA) and smaller: Individual Spec	
Mechanical shock		N/A			AEC-Q200 qualified	1500g 0.5,sec	
Beam Lord		N/A			AEC-Q200 qualified	Individual Spec	

Note: (i)The term "AEC-Q200 qualified" as used in this presentation shall mean that the products have been tested according to AEC-Q200 and have passed the tests. The scope of performance warranty for the products shall be only rated value, and shape and dimensions described in our product specification sheet.

- (ii) RV: Rated Voltage (定格電圧) Ex) "RV×1.5" means 1.5 times of rated voltage
- (iii) Only one version from JIS version or AEC-Q200 version can be chosen as automotive grade standard type.
- (iv) The specification vale of Automotive Powertrain and Safety on this chart is our normal value based on AEC-Q200 test condition. Please contact us for more detail.

Quality Grade Difference: Wire-Wound Inductor (ex. -x structure)

	TY Quality Grade 3	TY Qualit	TY Quality Grade 1		
	S :General Application L : Medical GHTF A/B	B:Telecom , Industrial M: Medical GHTF C	C :Automotive Body Info	A :Automotive Powertrain and Safety	
Parts code	L S XND6060YEL100MMG L L XND6060YEL100MMG NRS6045T100MMGK	LBXND6060YEL100MMG LMXND6060YEL100MMGNRS604 5T100MMGK8	LCXHF6060YEL100MMR LCXND6060YEL100MMG NRM6045T100MMRSV NRS6045T100MMGKV	L A XHG6060YEL100MMR NRT6045T100MMRS	
AEC-Q200 Test Method	N	/A	Quali	fied	
PPAP	N/A	Available upon request	Level $1{\sim}3$ Series Certification*	Level $1{\sim}5$ Item Certification*	
ISO9001 series		Cer	tified		
IATF16949	N	I/A	Produced at IATF16949 authenticated factories (NON APQP)	IATF16949 confirmed (APQP)	
Plant	TAIYO YUDEN (PHILIPPINES), INC.				
Inspection process inline	Electric performance	Tight sort	Tight sorting criteria		
Temperature range	-25 to 125℃(120) (Including self-heating)	-40 to 125℃ (Incl	-40 to 125℃ (Including self-heating)		
Median Life@ Tmax.* (including self heating)		>76 years (125℃)		>10 years (150℃)	
Fail in Time @ AEC-Q200 operating life*	Max 2,500	Max	Max 20		
Process Capability STD	Cpk > 1.33	Cpk > 1.67			
Process control	Meeting Spec/Standard	Control tightening of mar parameters fro	Full Control of manufacturing process from start to end		
Process Line	Standard	Automotive Line and Designated Operator			

^{*} Note: AEC-Q200 is used as the specification of the stress test which is included in PPAP document for automotive grade.

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^{*} The values differ depending on the product.

Inductor Spec Difference: Wire-Wound Inductor (1/4)

TY Quality Grade 2 TY Quality Grade 2 General Application Medical Devices GHTF Class A, B Class C Class C Style Class						
Medical Devices GHTF Class C Dis/EIA version Class A,B Class C Dis/EIA version Safety	Conditions	TY Quality Grade 3	TY Quality Grade 1			
Class A,B		General Application	Telecom 、Industrial	Automotive	Automotive	
First 2 letter of parts code		Medical Devices GHTF	Medical Devices GHTF	Body Info	Powertrain and	
Operating temperature range Xincluding self-heating		Class A,B	Class C	JIS/EIA version	Safety	
Wire-wound Ferrite Power Inductors -25~120℃*1 -40~125℃ -40~150℃ -55~150℃*5 Wire-wound Ferrite Power Inductors -25℃~125℃ -40~125℃ - -55~150℃*5 Wire-wound Ferrite Power Inductors -40~105℃ - - □QR/□QC/□QE -40~105℃ - - /□QN/□QPA/□QM*2 series -40~125℃ - - Wire-wound Metal Power Inductors -40~125℃ - - □EN/□QPA/□QE -40~125℃ - - □ZNX/□XP/□XP/□XH/□DN/□YPseries 500hours 85℃85%RH/1000hours 85℃85%RH/1000hours*3 Wire-wound Ferrite Power Inductors 60℃90~95%RH/500hours - - □QR/□QP/□QE 60℃90~95%RH/1000hours - - /□QN/□QN/□QP/□QE 60℃90~95%/500hours 85℃85%/1000hours - Wire-wound Metal Power Inductors 85℃500hours 85℃1000hours (Δ40℃) 125℃1000hours (Δ25℃)*3,*5 Wire-wound Ferrite Power Inductors 85℃500hours - - □XN/□XP/□XH/□DN/□Ypseries 85℃1000hours - - Wire-wound Ferrite Power Ind		,	LB / LM	LC	LA	
Color Co						
SN/ SN/ SN/ SN/ SN/ SN/ SN/ SN/	Wire-wound Ferrite Power Inductors	-/110~/1/5/				
Continue Continu		-25℃~125℃	70 -1		-55~150℃*5	
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □			-40~125℃		_	
□□QR/ □QPA/□QM*2 series			-40° °125 C		_	
Wire-wound Metal Power Inductors		-40∼1	105℃	-	-	
Damp heat life test Wire-wound Ferrite Power Inductors □ XN/□ XP/□ XH/□ DN/□ YPseries Wire-wound Ferrite Power Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ QB/□ QC/□ QE Wire-wound Ferrite Power Inductors □ EN/□ EP/□ EU*4 series Wire-wound Ferrite Power Inductors □ RN series Resin base type Wire-wound Ferrite Power Inductors □ RN series Resin base type Wire-wound Metal Power Inductors □ RN series Resin base type Wire-wound Ferrite Power Inductors □ RN series Resin base type Wire-wound Ferrite Power Inductors □ RN series Resin base type Wire-wound Ferrite Power Inductors □ RN series Resin base type Wire-wound Ferrite Power Inductors □ RN series Resin base type Wire-wound Ferrite Power Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Ferrite (Power) Inductors □ RN series Resin base type Wire-wound Metal Power Inductors □ RN series Resin base type Wire-wound Metal Power Inductors □ RN series Resin base type Wire-wound Metal Power Inductors □ RN series Resin base type Wire-wound Metal Power Inductors □ RN series Resin base type Wire-wound Metal Power Inductors □ RN series Resin base type Wire-wound Metal Power Inductors						
Damp heat life test Wire-wound Ferrite Power Inductors 60°C 90~95%RH 60°C 90~95%RH 1000hours 85°C 85%RH 1000hours 1000hours 85°C 85%RH 1000hours 1000ho			_			
Wire-wound Ferrite Power Inductors 500hours 500hours 85 $^\circ$ 85%RH/1000hours 1000hours 500hours 85 $^\circ$ 85%RH/1000hours 1000hours	<u> </u>					
Solution						
Wire-wound Ferrite Power Inductors 60℃ 90~95%RH/500hours - □RN series Resin base type 60℃ 90~95%RH/500hours - Wire-wound Ferrite (Power) Inductors 60℃ 90~95%RH/1000hours - □QN/□QPA/□QM*2 series 60℃ 90~95%/500hours 85℃85%/1000hours Wire-wound Metal Power Inductors 85℃85%/500hours*4 85℃/1000hours (Δ40℃) Loading at high temperature life test @Rated current Wire-wound Ferrite Power Inductors 85℃/500hours 85℃/1000hours (Δ40℃) 125℃/1000hours (Δ20℃)*3 □XN/□XP/□XH/□DN/□Ypseries 85℃/500hours 85℃/500hours - □RN series Resin base type 85℃/1000hours - Wire-wound Ferrite (Power) Inductors 85℃/1000hours - □QN*6/□QPA*6/□QPA*6/□QPA*2 series -*2*6 - Wire-wound Metal Power Inductors - 85℃/1000hours(Δ40℃) -	Wire-wound Ferrite Power Inductors	60℃ 90~95%RH/	H/1000hours	85℃ 85%RH∕		
RN series Resin base type 60°C 90~95%RH/500hours -	□□XN/□□XP/□□XH/□□DN/□□YPseries	500hours	85℃ 85%RH/:	1000hours*3	1000hours	
Wire-wound Ferrite (Power) Inductors G0℃ 90~95%RH/1000hours -	Wire-wound Ferrite Power Inductors	60%				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	□□RN series Resin base type	60 C	90~95%KH/500nours		_	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Wire-wound Ferrite (Power) Inductors					
Wire-wound Metal Power Inductors $60^{\circ}0^{\circ}95\%/500$ hours $85^{\circ}050\%/500$ hours $95^{\circ}050\%/500$ hours $95^{\circ}050\%/500\%/500$ hours $95^{\circ}050\%/500\%/500$ hours $95^{\circ}050\%/500\%/500$ hours $95^{\circ}050\%/500\%/500$ hours $95^{\circ}050\%/500\%/500$ hours $95^{\circ}050\%/500\%/500$ hours $95^{\circ}050\%/500\%/500\%/500$ hours $95^{\circ}050\%/500\%/500\%/500$ hours $95^{\circ}050\%/500\%/500\%/500\%/500\%/500\%/500\%/500\%$		60℃ 90~95%R	RH/1000hours	_	-	
Loading at high temperature life test @Rated current Wire-wound Ferrite Power Inductors Wire-wound Ferrite (Power) Inductors Wire-wound Ferrite (Power) Inductors 85° C/500hours 85° C/500hours 85° C/500hours 85° C/500hours 85° C/500hours 85° C/1000hours 85° C/10						
Loading at high temperature life test @Rated current Wire-wound Ferrite Power Inductors 85 $^{\circ}$ C/500hours 85 $^{\circ}$ C/1000hours ($^{\circ}$ 40 $^{\circ}$ C) 125 $^{\circ}$ C/1000hours 125 $^{\circ$	Wire-wound Metal Power Inductors	· ·	85°85%/11	000hours	_	
Wire-wound Ferrite Power Inductors 85° 1000 hours 125° 1000 hours 125° 1000 hours 105°		85℃85%/500hours*4	83 683 70/ 10		_	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		d current				
Wire-wound Ferrite Power Inductors \square RN series Resin base type Wire-wound Ferrite (Power) Inductors \square QB/ \square QC/ \square QE \square QN*6/ \square QPA*6/ \square QM*2 series Wire-wound Metal Power Inductors \square 85°C/1000hours \square 85°C/1000hours \square 85°C/1000hours \square 85°C/1000hours \square 85°C/1000hours		85°C ∕500hours				
□□RN series Resin base type Wire-wound Ferrite (Power) Inductors 85 ℃ / 1000hours □□QB/□□QC/□□QE - *2*6 /□□QN*6/□□QPA*6/□□QM*2 series - Wire-wound Metal Power Inductors - 85 ℃ / 1000hours (Δ40 ℃) -		or 105° C/1000hours ($\Delta 20^{\circ}$ C)*3		urs (Δ20℃)*3	(Δ25℃)*3,*5	
Wire-wound Ferrite (Power) Inductors $\square QB/\square QC/\square QE$ $V = 2*6$ Wire-wound Metal Power Inductors $85^{\circ} / 1000 \text{hours}$ $- *2*6$ $85^{\circ} / 1000 \text{hours}$			_			
□□QB/□□QC/□□QE		65 C/ 500H0ulS				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		85℃ /100				
Wire-wound Metal Power Inductors – 85℃/1000hours(Δ40℃)						
_				(1.1000)		
$85\%/500$ hours*4 or $105\%/1000$ hours($\Delta 20\%$)				_		
	□□EN/□□EP/□□EU series	85℃∕500hours*4	or 105℃/1000h	nours(Δ20°C)		

Inductor Spec Difference: Wire-Wound Inductor (2/4)

Conditions	TY Quality Grade 3 TY Quality Grade 2			TY Quality Grade 1	
	General Application	Telecom 、Industrial	Automotive	Automotive	
	Medical Devices GHTF	Medical Devices GHTF	Body Info	Powertrain and	
	Class A,B	Class C	JIS/EIA version	Safety	
First 2 letter of parts code	LS / LL	LB / LM	LC	LA	
Loading under damp heat life test @Rated cu	rrent				
Wire-wound Ferrite Power Inductors	60℃ 90~95%RH/	60℃ 90~95%Rŀ	H/1000hours	No definition	
□□XN/□□XP/□□XH/□□DN/□□Ypseries	500hours	_ *	3	No definition	
Wire-wound Ferrite Power Inductors	60%	C 90~95%RH/500hours		_	
□□RN series Resin base type	00 (,		
Wire-wound Ferrite (Power) Inductors	5000 00 050/	211 /4 2 2 2 I			
	60℃ 90~95%F	RH/1000hours	-		
/ QN/ QPA/ QM*2 series	60°C 00° 0E0/ DH /1	FOObaura *avaant 4			
Wire-wound Metal Power Inductors	60℃ 90~95%RH/5 - *4			-	
□□EN/□□EP/□□EU*4 series	- **4	No definition			
Low temperature life test Wire-wound Ferrite Power Inductors				No definition	
□□XN/□□XP/□□XH/□□DN/□□Ypseries	-40℃ ∕ 500hours	-40℃/10	00hours	No definition	
Wire-wound Ferrite Power Inductors					
$\square\square$ RN series Resin base type		-40℃/500hours		_	
Wire-wound Ferrite (Power) Inductors					
	-40℃/1	000hours	_		
/□□QN/□□QPA/□□QM*2 series					
Wire-wound Metal Power Inductors	-40℃ / 500hours	No defir	nition	_	
□□EN/□□EP/□□EU*4 series	-*4				
Temperature Cycling				EE00 + + = 0.00% =	
Wire-wound Ferrite Power Inductors	1000 1 0500 (100	-40℃ to 85℃.	/1000cycle	-55°C to 150°C*5	
□□XN/□□XP/□□XH/□□DN/□□Ypseries	-40℃ to 85℃/100cycle	-40℃ to 105℃/		-40 to 125℃*3 ∕1000cycle	
Wire-wound Ferrite Power Inductors	-40°C to 85°C / 100cycle –				
□□RN series Resin base type	-	_			
Wire-wound Ferrite (Power) Inductors					
	-40℃ to 85°	_			
/□□QN/□□QPA/□□QM*2 series					
Wire-wound Metal Power Inductors	-40℃ to 85℃/100cycle	-40℃ to 125℃	/1000cvclo		
□□EN/□□EP/□□EU*4 series	-40 C to 65 C/ 100Cycle	-40 C to 125 C	/ IUUUCYCIE	_	

Inductor Spec Difference: Wire-Wound Inductor (3/4)

Conditions	TY Quality Grade 3	TY Quality	Grade 2	TY Quality Grade 1	
	General Application	Telecom 、Industrial	Automotive	Automotive	
	Medical Devices GHTF	Medical Devices GHTF	Body Info	Powertrain and	
	Class A,B	Class C	JIS/EIA version	Safety	
First 2 letter of parts code	LS / LL	LB / LM	LC	LA	
Resistance to soldering heat					
Wire-wound Ferrite Power Inductors	260°C F 24in			250℃_30sec	
□□XN/□□XP/□□XH/□□DN/□□YPseries		260℃_5sec_2times		3times	
Wire-wound Ferrite Power Inductors		260℃ 5sec 2times			
□□RN series Resin base type		200 C_5sec_2times		_	
Wire-wound Ferrite (Power) Inductors					
	260℃_5s	ec_3times	_		
/□□QN/□□QPA/□□QM*2 series					
Wire-wound Metal Power Inductors	260℃ 5sec 2times			_	
□□EN/□□EP/□□EU series	200 0_5500_2011105				
Resistance to flexure of substrate					
Wire-wound Ferrite Power Inductors	1.0mm-Board 2mm				
□□XN/□□XP/□□XH/□□DN/□□Ypseries	1.0mm-Board _2mm 1.6mm-Board _2mm				
Wire-wound Ferrite Power Inductors	1.0mm-Board 2mm			_	
□□RN series Resin base type					
Wire-wound Ferrite (Power) Inductors	1 0mm Bo	ard 2mm			
□□QB/□□QC/□□QE /□□QN/□□QPA/□□QM*2 series	1.011111-006	ard _2mm	_		
Wire-wound Metal Power Inductors					
□□EN/□□EP/□□EU series	1.0mm-Board _2mm	1.6mm-Boar	d _2mm	_	
Adhesion of terminal electrode					
Wire-wound Ferrite Power Inductors		10N 5sec		47 714 60	
$\square \square XN/\square \square XP/\square \square XH/\square \square DN/\square \square Ypseries$		17.7N_60sec			
Wire-wound Ferrite Power Inductors	4011.5				
□□RN series Resin base type	10N_5sec			_	
Wire-wound Ferrite (Power) Inductors					
□□QB/□□QC/□□QE	10N_5sec		-		
/□□QN/□□QPA/□□QM*2 series	3311_3333				
Wire-wound Metal Power Inductors	10N 5000	17.70	.0000		
□□EN/□□EP/□□EU series	10N_5sec 17.7N_60sec		ousec	_	

Inductor Spec Difference: Wire-Wound Inductor (4/4)

Conditions	TY Quality Grade 3 TY Quality Grade 2			TY Quality Grade 1
	General Application Medical Devices GHTF Class A,B	Telecom 、Industrial Medical Devices GHTF Class C	Automotive Body Info JIS/EIA version	Automotive Powertrain and Safety
First 2 letter of parts code	LS / LL	LB / LM	LC	LA
Mechanical shock				
Wire-wound Ferrite Power Inductors □□XN/□□XP/□□XH/□□DN/□□YPseries		100G 6msec		
Wire-wound Ferrite Power Inductors □□RN series Resin base type		No definition		_
Wire-wound Ferrite (Power) Inductors □□QB/□□QC/□□QE /□□QN/□□QPA/□□QM*2 series	No definition —			
Wire-wound Metal Power Inductors □□EN/□□EP/□□EU series		No definition		_
Resistance to vibration X/Y/Z direction				
Wire-wound Ferrite Power Inductors □□XN/□□XP/□□XH/□□DN/□□YPseries	10~55~	10~2K~10Hz/ 20min cycle (each 4 hours)		
Wire-wound Ferrite Power Inductors □□RN series Resin base type	10~55~	_		
Wire-wound Ferrite (Power) Inductors □□QB/□□QC/□□QE /□□QN/□□QPA/□□QM*2 series	10∼55∼10Hz/1min (cycle (each 2 hours)	_	
Wire-wound Metal Power Inductors □□EN/□□EP/□□EU series	10~55~	10Hz/1min cycle (each 2	! hours)	_
(Reference) Derating				
Wire-wound Ferrite Power Inductors □□XN/□□XP/□□XH/□□DN/□□YPseries	No description			
Wire-wound Ferrite Power Inductors □□RN series Resin base type	No description description			_
Wire-wound Ferrite (Power) Inductors □□QB/□□QC/□□QE /□□QN/□□QPA/□□QM*2 series	No description	description –		
Wire-wound Metal Power Inductors □□EN/□□EP/□□EU series	No description	descri	_	
1	TAIVOVI			**

Quality Grade Difference: Multilayer Metal Power Inductor

	TY Quality Grade 3	TY Quality Gr	TY Quality Grade 2	
	S :General Application L:Medical GTHF A/B	B :Telecom and Industrial M :Medical GHTF C	C:Automotive Body Info	A :Automotive Powertrain and Safety
Parts code	LSCN/LLCN series MC series	LBCN/LMCN series MC_8 series	LCCN series MC_V series	-
AEC-Q200 Test Method		N/A	Qı	ualified
PPAP	N/A	Available upon request	Level 1~3* Series Certification	Level 1∼5* Item Certification
ISO9001 series		Certified	d	
IATF16949		N/A	IATF16949 c	confirmed (APQP)
Plant	WAKAYAMA TAIYO YUDEN CO., LTD. TAIYO YUDEN (PHILIPPINES), INC.			
Design for safety margin based on rated voltage	×2.8	×3.3	×3.3	
Inspection process inline		Electric performance		+Impulse test
Temperature range (Including self-heating)	-40 to 125℃	-40 to 125℃/	150℃	-55 to 150℃
Median Life @ 125℃(including self heating)	> 50 years	> 290 years		> 580 years
Fail in Time @ AEC-Q200 operating life	Max 2,500	225~450		Max 225
Process Capability STD.	Cpk > 1.33	Cpk>1.67		
Process control	Meeting Spec/Standard	Full Control of manufacturing process from start to end		
Process Line	Standard	Automotive Line and Designated Operator		

^{*} Note: AEC-Q200 is used as the specification of the stress test which is included in PPAP document for automotive grade.

Inductor Spec Difference: Multilayer Metal Power Inductor

	TY Quality Grade 3	TY Qual	ity Grade 2	TY Quality Grade 1
	S:General Application L:Medical GHTF A/B	B:Telecom and Industrial M:Medical GHTF C	C:Automotive Body Info JIS/EIA version	A:Automotive Powertrain and Safety
Parts code	LSCN/LLCN series	LBCN/LMCN series	LCCN series	-
Operating temperature range **Including self-heating	-40∼125℃	-40~12	25℃/150℃	-40~125℃ -55~150℃
Damp heat life test	60℃ 90~95%RH 500hours		0~95%RH Ohours	85℃ 85%RH 1000hours
Loading at high temperature life test @Rated current	85℃ 500hours	85℃/110℃ 1000hours		85℃/110℃ 1000hours
Temperature Cycling	-40℃ to 85℃ 100cycle	-40℃ to 125℃/150℃ 1000cycle		-40 to 125℃ -55℃ to 150℃ 1000cycle
Resistance to soldering heat	260℃_5sec 3times			260℃_30sec 3times
Resistance to deflection	В	oard thickness_0.8mm Displacement_2mm		
Adhesion of terminal electrode	10N_5sec			17.7N_60sec
Mechanical shock		No definition		100G 6msec
Resistance to vibration X/Y/Z direction	10~55~1	.0Hz/1min cycle (each 2 hours)		10∼2000∼10Hz/ 20min cycle (each 4 hours)
(Reference) Derating	No description	Description		