

Listing of PCNs

Introduction

This file contains PCN information for the product(s) referenced by the file name.

Note that the file may contain multiple PCNs. If this is the case, they are arranged in chronological order, so to see the most recent PCN scroll to the end.

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Resistors Product Change Notification

PCN Number and Title	PCN-2015-RBU06 Facility Change Announcement TKL		
Notification Launch Date	13 April 2015		
Type of Change	<input type="checkbox"/> End of Life Notification <input checked="" type="checkbox"/> Manufacturing Facility Change or Addition <input type="checkbox"/> Datasheet Specification Change <input type="checkbox"/> Other: <input type="checkbox"/> Material Change <input type="checkbox"/> Process Change <input type="checkbox"/> Design Change 		
Manufacturing Location(s) Affected	Corpus Christi (USA), Mexicali (Mexico)	Date of Change Implementation	January 2015

Products Affected		
Product Family	Datasheet Link(s)	Comment
LRC-LRF3WAK-MIL, LRC-LRF3WLF-MIL, LRC-LRF3W-MIL, TFS-1206LF, TFS-LRC0002, TFS-R003, TFS-R008, TFS-R010, TFS-TF1206AK, TFS-TF245	NA	
LRC-LR1206, LRC-LR1206LF, LRC-LR2010, LRC-LR2010LF, LRC-LR2512, LRC-LR2512LF, LRC-LRF1206, LRC-LRF1206LF, LRC-LRF2010, LRC-LRF2010LF, LRC-LRF2512, LRC-LRF2512LF, LRC-LRF3W, LRC-LRF3WLF, LRC-LRZ1206, LRC-LRZ1206LF, LRC-LRZ2010, LRC-LRZ2010LF, LRC-LRZ2512, LRC-LRZ2512LF	NA	

Description of Change	TT Electronics is relocating the back end visual, test and package LRC & TFS processes from our facility in Matamoros, MX to our facility in Mexicali, MX.
Description of Change (Continued)	
Reason for Change	The move helps mitigate rising production costs for the LRC & TFS product lines.
Implementation Plan	TT electronics will build approximately 2 months of safety stock through Dec 31, 2014. On Jan 1 2015, equipment will be disconnected and relocated to Mexicali. TT electronics will validate product and process in Mexicali per customer specification.
Customer Impact	TT electronics will notify active customers.
Recommendations	Not applicable
Availability of Previously Manufactured Product	Not applicable
Sales Contacts	EMEA: Armando Marnati armando.marnati@ttelelectronics.com Americas: Mike Graham mike.graham@ttelelectronics.com Asia / Pacific: Janson Chuen janson.chuen@ttelelectronics.com

Title	Name	Signature / Date
Product Line Manager	David Winker	XXXXXXXX 17 Sept 2014
Global Product Line Director	Barry Peters	XXXXXXXX 13/4/2015
Global Sales Director, Resistors	Klaus Zwerschina	XXXXXXXX 14/4/2015

Additional Information:

N/A



www.ttelelectronicsresistors.com



Resistors Product Change Notification

PCN Number	PCN-2016-RBU04
PCN Title	Thickfilm Front End Product Line Re-location from Corpus Christi (USA) to Mexicali (Mexico)
PCN Date	
Type of Change	<input type="checkbox"/> End of Life Notification <input type="checkbox"/> Material Change <input checked="" type="checkbox"/> Manufacturing Facility Change or Addition <input type="checkbox"/> Process Change <input type="checkbox"/> Datasheet Specification Change <input type="checkbox"/> Design Change <input type="checkbox"/> Other:
Manufacturing Location(s) Affected	TT electronics Corpus Christi, TT electronics Mexicali
Date of Change Implementation	January 2017

Products Affected		
Product Series	Product Type(s)	Datasheet Link
LR (F) Series – Low Value Flat Chip Resistor	All commercial LR(F) product	http://www.ttelectronicsresistors.com/datasheets/lr.pdf
LRF3W Series – Low Range 3 Watt SMT Chip Resistor	All commercial LRF3W product	http://www.ttelectronicsresistors.com/datasheets/lrf3w.pdf
HVC Series – High Voltage Chip Resistors	All commercial HVC product	http://www.ttelectronicsresistors.com/datasheets/hvc.pdf
PWC Series – Pulse Withstanding Chip Resistors	All commercial PWC product	http://www.ttelectronicsresistors.com/datasheets/pwc.pdf
LRZ Series – High Current Jumper	All commercial LRZ product	http://www.ttelectronicsresistors.com/datasheets/lrz.pdf
SCR Series – High Power Chip Resistor	All commercial SCR product	http://www.ttelectronicsresistors.com/datasheets/sc3.pdf
Change Detail		
Description of Change	TT electronics is relocating the front end processes from our facility in Corpus Christi, USA to our facility in Mexicali, MX. This relocation is a continuation of the back end process relocation to TT electronics, Mexicali in 2015.	

Reason for Change	The relocation helps mitigate rising production costs for the Thickfilm Product Line Series.
Implementation Plan	TT electronics will build approximately 7 months of safety stock through December 31, 2016. On January 4, 2017, equipment will be disconnected and relocated to Mexicali. TT electronics will conduct product validation in Mexicali as per AEC - Q200 REV D specifications and requirements.
Customer Impact	TT electronics will notify customers via PCN-2016-RBU04. The 7 month safety stock, standardized training and integrated Program Management teams will prevent any supply chain disruptions to the customer.
Recommendations	NA
Availability of Previously Manufactured Product	NA
Availability of Approval Samples	Upon formal request via normal ordering process.
Sales Contacts	Americas: Mike Graham mike.graham@ttelectronics.com Asia: Janson Chuen janson.chuen@ttelectronics.com Europe (EMEA): Klaus Zwerschina klaus.zwerschina@ttelectronics.com http://www.ttelectronicsresistors.com/sales.php

Approval			
	Name	Title	Date
Issued by	David Peters	Product Line Manager	
Approved by	Barry Peters	VP R&D	
Approved by	Klaus Zwerschina	Global Sales Director	

Additional Information

TT electronics – Welwyn, UK Commercial Thickfilm product is not affected by this relocation. All validation will be done as per AEC-Q200 REV D specifications and requirements.

Resistors Product Change Notification

PCN Number	PCN-2018-RBU11
PCN Title	Intra-company transfer of leaded (Pb) LRC, LRZ, LRF3W, SCW, PWC & HVC Series Chip Resistors
PCN Date	Original Date - 10/07/2018 Revised dated – 19/09/2018
Type of Change	<input type="checkbox"/> End of Life Notification <input type="checkbox"/> Material Change <input checked="" type="checkbox"/> Manufacturing Facility Change or Addition <input type="checkbox"/> Process Change <input type="checkbox"/> Datasheet Specification Change <input type="checkbox"/> Design Change <input type="checkbox"/> Other:
Manufacturing Location(s) Affected	TT Electronics Mexicali & TT Electronics Bedlington
Date of Change Implementation	11th July 2018

Products Affected		
Product Series	Product Type(s)	Datasheet Link
HVC Series – High Voltage Chip Resistors	All leaded HVC product currently manufactured in Mexicali	http://www.ttelectronics.com/sites/default/files/resistors-datasheets/HVC.pdf
LRC Series – Low Value Chip Resistors	All leaded LRC product including custom variants (TFS & LR “AW”) currently manufactured in Mexicali including custom LR	http://www.ttelectronics.com/sites/default/files/resistors-datasheets/LR.pdf
PWC Series – Pulse Withstanding Chip Resistors	All leaded PWC product currently manufactured in Mexicali	http://www.ttelectronics.com/sites/default/files/resistors-datasheets/PWC.pdf
SCW Series – High Power Chip Resistors	All leaded SCW product currently manufactured in Mexicali	http://www.ttelectronics.com/sites/default/files/resistors-datasheets/SC3.pdf
LRF3W Series – Low Value 3W Chip Resistors	All leaded LRF3W product currently manufactured in Mexicali	http://www.ttelectronics.com/sites/default/files/resistors-datasheets/LRF3W.pdf
LRZ series – High Current Jumper Chip	All leaded LRZ product currently manufactured in Mexicali	http://www.ttelectronics.com/sites/default/files/resistors-datasheets/LRZ.pdf

Change Detail	
Description of Change	TT Electronics currently manufacture the affected product series' in both Bedlington and Mexicali. Manufacture of these parts is being consolidated into only the Bedlington plant
Reason for Change	Manufacture of these parts is being consolidated into only the Bedlington plant There is no difference in form, fit or function between Mexicali and Bedlington manufactured parts.
Implementation Plan	TT electronics Mexicali will transfer all backlog of the affected part numbers to TT Electronics Bedlington. Any new orders will be manufactured by TT Electronics Bedlington
Customer Impact	TT electronics will notify customers via PCN-2018-RBU11. All open customer orders will be manufactured and supplied by TT Electronics Bedlington. Any new orders will be manufactured by TT Electronics Bedlington. Standard packing quantities (pieces per reel) will be honored for open orders. Any future orders will be packed in 1000 3000 reels (1206 & 2010) & 1800 reels (1225 & 2512) only. Expected lead times are as follows: 6 weeks on past due orders Original commit date on open order book providing commit date is >6 weeks out 14 Weeks LT on new orders
Recommendations	Customers can continue ordering through their existing channels or can place orders direct onto the Bedlington factory, using their existing part numbering. There is no difference in form, fit or function between Mexicali and Bedlington manufactured parts
Availability of Previously Manufactured Product	NA
Availability of Approval Samples	NA
Sales Contacts	Americas OEM: Kevin Marzano Kevin.marzano@ttelelectronics.com Europe (EMEA): Peter Bauer Peter.bauer@ttelelectronics.com Asia (OEM): Janson Chuen janson.chuen@ttelelectronics.com Americas Distribution: Jason Gildea jason.gildea@ttelelectronics.com Europe (EMEA) Distribution: Claudia Patzak-Kruger Claudia.patzak@ttelelectronics.com Asia Distribution: Willis Ong Willis.Ong@ttelelectronics.com

Approval			
	Name	Title	Date
Issued by	David Peters	Product Line Manager	19/09/2018
Approved by	Barry Peters	VP Product Management & Engineering	19/09/2018
Approved by	Guy Millard	VP & GM Resistors Business Unit	19/09/2018

Resistors Product Change Notification

PCN Number	PCN-2019-RBU03
PCN Title	Intra-company transfer of Lead (Pb) Free LRC, LRZ, LRF3W, SCW, PWC & HTC Series Chip Resistors
PCN Date	01 st April 2019
Type of Change	<input type="checkbox"/> End of Life Notification <input type="checkbox"/> Material Change <input checked="" type="checkbox"/> Manufacturing Facility Change or Addition <input type="checkbox"/> Process Change <input type="checkbox"/> Datasheet Specification Change <input type="checkbox"/> Design Change <input type="checkbox"/> Other:
Manufacturing Location(s) Affected	TT Electronics Mexicali & TT Electronics Bedlington
Date of Change Implementation	01 st April 2019

Products Affected		
Product Series	Product Type(s)	Datasheet Link
LRC Series Low Value Chip Resistors	All LRC product including custom variants (TFS & LR "AW") currently manufactured in Mexicali including custom LR	https://www.ttelectronics.com/TTElectronics/media/ProductFiles/Resistors/Datasheets/LR.pdf
PWC Series Pulse Withstanding Chip Resistors	All PWC product currently manufactured in Mexicali	https://www.ttelectronics.com/TTElectronics/media/ProductFiles/Resistors/Datasheets/PWC.pdf
SCW Series High Power Chip Resistors	All SCW product currently manufactured in Mexicali	https://www.ttelectronics.com/TTElectronics/media/ProductFiles/Resistors/Datasheets/SC3.pdf
LRF3W Series - Low Value 3W Chip Resistors	All LRF3W product currently manufactured in Mexicali	https://www.ttelectronics.com/TTElectronics/media/ProductFiles/Resistors/Datasheets/LRF3W.pdf
LRZ series High Current Jumper Chip	All LRZ product currently manufactured in Mexicali	https://www.ttelectronics.com/TTElectronics/media/ProductFiles/Resistors/Datasheets/LRZ.pdf
HTC series High Temperature Chip	All HTC product currently manufactured in Mexicali	https://www.ttelectronics.com/TTElectronics/media/ProductFiles/Resistors/Datasheets/HTC.pdf

Change Detail	
Description of Change	TT Electronics currently manufacture the affected product series in both Bedlington and Mexicali. Manufacture of these parts is being consolidated into only the Bedlington plant
Reason for Change	Creation of a thick film center of excellence.
Implementation Plan	Any new orders will be manufactured by TT Electronics Bedlington. TT Electronics reserve the right to transfer open orders as appropriate.
Customer Impact	Any new orders will be manufactured by TT Electronics Bedlington. Standard packing quantities (pieces per reel) will be honored for open orders. Any future orders will be packed in 3000 reels (1206 & 2010) & 1800 reels (1225 & 2512) only.
Recommendations	Customers can continue ordering through their existing channels or can place orders direct onto the Bedlington factory, using their existing part numbering. There is no difference in form, fit or function between Mexicali and Bedlington manufactured parts
Availability of Previously Manufactured Product	NA
Availability of Approval Samples	NA
Sales Contacts	Americas (OEM): Kevin Marzano Kevin.marzano@ttelelectronics.com Europe (OEM): Peter Bauer Peter.bauer@ttelelectronics.com Asia (OEM): Janson Chuen janson.chuen@ttelelectronics.com Americas Distribution: Jason Gildea jason.gildea@ttelelectronics.com Europe (EMEA) Distribution: Claudia Patzak-Kruger Claudia.Patzak-Kruger@ttelelectronics.com Asia Distribution: Willis Ong Willis.Ong@ttelelectronics.com

Approval			
	Name	Title	Date
Issued by	David Peters	Product Line Manager	01 st April 2019
Approved by	Barry Peters	VP Product Management & Engineering	01 st April 2019
Approved by	Guy Millard	VP & GM Resistors Business Unit	01 st April 2019

Resistors Product Change Notification

PCN Number	PCN-2022-RBU18
PCN Title	Datasheet Update – LR Series
PCN Date	11 th October 2022
Type of Change	<input type="checkbox"/> End of Life Notification <input type="checkbox"/> Manufacturing Facility Change or Addition <input checked="" type="checkbox"/> Datasheet Specification Change <input type="checkbox"/> Other: <input type="checkbox"/> Material Change <input type="checkbox"/> Process Change <input type="checkbox"/> Design Change
Manufacturing Location(s) Affected	TT Electronics Bedlington
Date of Change Implementation	11 th October 2022

Products Affected

TT Series	Datasheet Link
LR Series	https://www.ttelectronics.com/TTElectronics/media/ProductFiles/Datasheets/LR.pdf

Change Detail

Description of Change	Update to the LR Series Datasheet to reflect changes to the TCR parameters with respect to value breaks. There will be no change to the product form, fit or function and this PCN is for notification only. See Appendix 1.
Reason for Change	To ensure datasheet is in line with true TCR parameters.
Implementation Plan	With immediate effect
Customer Impact	Product form, fit or function is unchanged.
Recommendations	Please contact your local Sales / FAE team for assistance if required.
Availability of Previously Manufactured Product	N/A
Availability of Approval Samples	N/A
Sales Contacts	Americas: Kevin Marzano kevin.marzano@ttelectronics.com Europe: Claudia Patzak-Kruger Claudia.patzak@ttelectronics.com Asia: Janson Chuen janson.chuen@ttelectronics.com

Approvals			
	Name	Title	Date
Issued by	Mark Beeston	Product Line Manager	11th October 2022
Approved by	Heather Baird	VP Product Management	11th October 2022
Approved by	Klaus Zwerschina	Global Sales Director	11th October 2022

Appendix 1

Before Version

Electrical Data

		LR(F)1206	LR(F)2010	LR(F)2512
Power rating @70°C	watts	0.5	1	2
Resistance range ¹	ohms	R003 to 1R0		
Resistance tolerance ¹	%	<R01: 5, ≥R01: 1, 2, 5		
TCR	ppm/°C	≥R05: ±100, R025-R047: <+200, R015-R024: <+300, R01-R014: <+500, <R01: <+900		
Dielectric withstand	volts	200		
Ambient temperature range	°C	-55 to +150		
Values		E24 preferred ²		
Temperature rise at rated power	°C	40	80	90
Pad / trace area ³	mm ²	30	100	300

Note 1: Contact factory for value – tolerance combinations outside this range. Note 2: Many values = N x R001 and N x R005 up to N=10 are also available. Note 3: Recommended minimum pad & adjacent trace area for each termination for rated dissipation on FR4 PCB

After Version

Electrical Data

		LR(F)1206	LR(F)2010	LR(F)2512
Power rating @70°C	watts	0.5	1	2
Resistance range ¹	ohms	R003 to 1R0		
Resistance tolerance ¹	%	<R01: 5, ≥R01: 1, 2, 5		
TCR	ppm/°C	≥R05: ±100, R025-R047: <+500, <R025: <+900		
Dielectric withstand	volts	200		
Ambient temperature range	°C	-55 to +150		
Values		E24 preferred ²		
Temperature rise at rated power	°C	40	80	90
Pad / trace area ³	mm ²	30	100	300

Note 1: Contact factory for value – tolerance combinations outside this range. Note 2: Many values = N x R001 and N x R005 up to N=10 are also available. Note 3: Recommended minimum pad & adjacent trace area for each termination for rated dissipation on FR4 PCB