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### Statement of Persistent Organic Pollutants (POP) Compliance

We hereby certify that all fixed and variable resistor series from TT Electronics listed in Appendix A as “POP free” are fully compliant with the related requirements of European Union Regulation (EC) 2019/1021 concerning Persistent Organic Pollutants regulations and including (EU) 2020/784.

1. TT Electronics suppliers/partners have confirmed the material composition of this product.
2. TT Electronics has implemented processes to confirm and document compliance.
3. The information provided may be based upon actual test data, or on information from our vendors, raw material suppliers or subcontractors.
4. The checks on POPs are ongoing and we invite enquiries about product series not yet listed or listed as “Unchecked”.

A handwritten signature in black ink, appearing to read 'S. Oxley', is written over a large, semi-transparent watermark that says 'POPS'.

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Business Development Engineer  
Fixed and Variable Resistors

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## Appendix A

The following resistive product series have the POP status shown:

Product Category	Series / Style / Start of MPN	POP Status	Example MPN
Potentiometer	PSxxL	POP free	PS45L-R01FBR100KN
Potentiometer	PSxxM	POP free	PS30M-OPC1FBR100KN
Resistor	1900	Unchecked	DIP-1954-03-1001 -B-F
Resistor	3810	Unchecked	3810-10GKI
Resistor	4500	Unchecked	450112-15MFI
Resistor	4530	Unchecked	453112-100M/100KJF
Resistor	4700	Unchecked	SIP-4701-03-1001-F-B
Resistor	8900	Unchecked	FP-8987-03-1001-B-F
Resistor	1600-1900	Unchecked	C1600-10RJI
<i>Resistor</i>	<i>AP160x / AP190x</i>	<i>See 1600/1900</i>	<i>AP1600-10RJI</i>
Resistor	APC	Unchecked	APC0402AY-1K54WT10
Resistor	ASC	POP free	ASC0402-22RFT5
<i>Resistor</i>	<i>AW160x / AW190x</i>	<i>See 1600/1900</i>	<i>AW1600-10RJI</i>
<i>Resistor</i>	<i>B160x / B190x</i>	<i>See 1600/1900</i>	<i>B1600-10RJI</i>
Resistor	BCN	POP free	BCN104AB102J7
Resistor	BPC	POP free	BPC10103G
Resistor	BPR	POP free	BPR10500F
<i>Resistor</i>	<i>C160x / C190x</i>	<i>See 1600/1900</i>	<i>C1600-10RJI</i>
<i>Resistor</i>	<i>CAF</i>	<i>See SQP/CAF/CAW</i>	<i>CAF24701JLF</i>
Resistor	CAR	POP free	CAR5V-31K6PI or CAR5LFV3162PA
<i>Resistor</i>	<i>CAW</i>	<i>See SQP/CAF/CAW</i>	<i>CAW210R0JLF</i>
<i>Resistor</i>	<i>CB160x / CB190x</i>	<i>See 1600/1900</i>	<i>CB1600-10RJI</i>
Resistor	CCN	Unchecked	CCN-7800-01-1001-B-B
Resistor	CHC	Unchecked	CHC-CB0565ALF-01-51R1-J
Resistor	CHC Precision	Unchecked	CHC-CH4ALF-03-1002-BB
<i>Resistor</i>	<i>CP160x / CP190x</i>	<i>See 1600/1900</i>	<i>CP1600-10RJI</i>
Resistor	CR	POP free	CR0503G-10KFI
Resistor	CSL	POP free	CSLSR001FLF
Resistor	CSLS	POP free	CSLSR001FLF
<i>Resistor</i>	<i>CVF</i>	<i>See SQM/CVF/CVW</i>	<i>CVF24701JLF</i>
<i>Resistor</i>	<i>CVW</i>	<i>See SQM/CVF/CVW</i>	<i>CVW210R0JLF</i>
Resistor	D	POP free	D41C
<i>Resistor</i>	<i>D1206</i>	<i>See PFC-D</i>	<i>D120602-1K0-3K3FB</i>
<i>Resistor</i>	<i>D23</i>	<i>See DIV23</i>	<i>D23-1K0-3K3FB</i>
<i>Resistor</i>	<i>D4 / D5</i>	<i>See D</i>	<i>D41C</i>
<i>Resistor</i>	<i>D55342</i>	<i>See MIL-CHIP</i>	<i>D55342H11B1R00S</i>
<i>Resistor</i>	<i>D6 / D7 / D8 / D9</i>	<i>See D</i>	<i>D61C</i>
<i>Resistor</i>	<i>DIP</i>	<i>See 1900</i>	<i>DIP-1954-03-1001 -B-F</i>
Resistor	DIP-U	Unchecked	DIP-U1959-03-1001 -B-S-2
Resistor	DIV23	Unchecked	D23-1K0-3K3FB or SOT-DIV23LF-03-1001-3301-FB
<i>Resistor</i>	<i>DPB</i>	<i>See M900</i>	<i>DPB-M954-02-1002-FB</i>
Resistor	DPCR	POP free	DPCR2512-20KJ18
Resistor	DSC	POP free	DSC0603-10KFT5

Resistor	EBW5216	POP free	EBW5216PNT-L050JB
Resistor	EBW8518	POP free	EBW8518PNT-L050JB
Resistor	EMC	Unchecked	EMC2-33RMI
Resistor	F500	Unchecked	F501
Resistor	FCR	Unchecked	FCR0603-22RJI
Resistor	FP	See 8900	FP-8987-03-1001-B-F
Resistor	FP-U	Unchecked	FP-U8989-05-1001-Q-S-2
Resistor	GBCN	Unchecked	GBCN164AB472J7
Resistor	GCR	Unchecked	GCR0805EW-10KFT3
Resistor	GHVC	Unchecked	GHVC1206-1M0FT18
Resistor	GL	See SOIC-C	GL0ALF021002BAT
Resistor	GP	Unchecked	GP501001001FLFLTR
Resistor	GQ	See QSOP-C	GQ0ALF021002BAT
Resistor	GS	See SOIC-C	GS4ALF021002BAT
Resistor	GUB	Unchecked	GUB-GL0ALF-03-2001-B-A
Resistor	GUS-QS001	See QS001	GUS-QS001LF-03-56R0-K
Resistor	GUS-QS009	See R2R	GUS-QS009LF-01-1002-G
Resistor	GUS-QS0A/ GUS-QS0B / GUS-QS8 / GUS-QSC	See QSOP	GUS-QS0ALF-01-1002-FB
Resistor	GUS-SL0 / GUS-SL8 / GUS-SS4 / GUS-SS7 / GUS-SS8	See SOIC	GUS-SL0ALF-01-1002-F-B
Resistor	GUS-TS005	See TS005	GUS-TS005-4462
Resistor	GUS-TS0A / GUS-TS0B / GUS-TS8 / GUS-TSC	See TSSOP	GUS-TS0ALF-01-1002-FB
Resistor	GWCR	POP free	GWCR01005-10KFT20
Resistor	HDSC	POP free	HDSC0805-2K0JT3
Resistor	HPDC	Unchecked	HPDC1206-2K0JT5
Resistor	HPWC	POP free	HPWC0805-2K0JT3
Resistor	HR	POP free	HR0503G-10GYI
Resistor	HTC	POP free	TKC-HTC1206LF-100RF
Resistor	HTCR	POP free	HTCR0805E-10KFT3
Resistor	HVC	POP free	HVC1206-4M7FT3
Resistor	HVD	POP free	H08CD-100M/100KFD
Resistor	HVP	POP free	HVP04C-100MFB02
Resistor	IGN	Unchecked	IGN-P2525-1234
Resistor	L	POP free	L043S331FLF
Resistor	L04 / L05 / L06 / L07 / L08 / L09 / L10 / L11 / L12 / L13 / L14	See L	L043S331FLF
Resistor	LCS	POP free	LCS0603-R20DT5LF
Resistor	LHVC	POP free	LHVC0603-100KFT5
Resistor	LOB	POP free	LOB3-R01JI or LOB3R010FLFLT
Resistor	LR	POP free	LRF1206-R02FW or LRC-LRF1206LF-01-R020-F
Resistor	LRC-LR(F)	See LR	LRC-LRF1206LF-01-R020-F
Resistor	LRC-LRF3W	See LRF3W	LRC-LRF3WLF-01-R020-F
Resistor	LRC-LRZ	See LRZ	LRC-LRZ1206LF-R000
Resistor	LRCS/LVC	POP free	LRCS0402-R027FT10 or LVC-LVC0402LF-R027-F
Resistor	LRF	See LR	LRF1206-R02FW
Resistor	LRF3W	POP free	LRF3W-R02FW or LRC-LRF3WLF-01-R020-F
Resistor	LRF4W	POP free	LRF4W-R02FT18
Resistor	LRMA	POP free	LRMAM0805-R01FT5
Resistor	LRMAH2512	POP free	LRMAH2512B-L50FT5

Resistor	LRMAP2726	POP free	LRMAP2726B-1LOFT14
Resistor	LRMAP2817	POP free	LRMAP2817B-R005FT
Resistor	LRMAP3920	POP free	LRMAP3920C-R0015FT
Resistor	LRMAP4026	POP free	LRMAP4026B-1LOFT1
Resistor	LRMAP5930	POP free	LRMAP5930B-R0002FT
Resistor	LRZ	POP free	LRZ1206-R000 or LRC-LRZ1206LF-R000
Resistor	LVC	See LRCS/LVC	LVC-LVC0402LF-R027-F
Resistor	M55342	See MIL-CHIP	M55342H11B1R00S
Resistor	M83401	Unchecked	M8340101K1001FA
Resistor	M900	Unchecked	DPB-M954-02-1002-FB
Resistor	MFC	Unchecked	MFC0402-R015FT10
Resistor	MFP	POP free	MFP1-4K7FI
Resistor	MFR	POP free	MFR3-4K7FC
Resistor	MF-S	POP free	MF1/2S-3K3JI
Resistor	MIL-CHIP	POP free	M55342H11B1R00S or D55342H07B1R00S
Resistor	NAS	POP free	NAS1-2K7FI or NAS12701FLF
Resistor	NT	POP free	NT1/21000FLF
Resistor	OAR	POP free	OAR1-R01JI or OAR1R010JLF
Resistor	OARS	POP free	OARS1-R01JI or OARS1R010JLF
Resistor	OAR-TP	POP free	OAR1TP-R01JI or OAR1TPR010JLF
Resistor	PCF	POP free	PCF0201R-1K54BI or PCF-W0201LF-03-1541-B-P-LT
Resistor	PCR	POP free	PCR0805F-10KBI
Resistor	PFC	POP free	W0402R-01-1K0BI or PFC-W0402LF-01-1001-B
Resistor	PFC-D	POP free	D120602-1K0-3K3FB or PFC-D1206LF-02-1001-3301-FB
Resistor	PFC-D-HT	POP free	PFC-D1206HT-02-1001-3301-FB
Resistor	PFC-HT	POP free	W0603HT-01-1K0F or PFC-W0603HT-01-1001-F
Resistor	PFC-UD	POP free	PFC-UD1206-03-1002-3301-B-S-1
Resistor	PR	POP free	PR4Y-10KBI
Resistor	PTS	Unchecked	PTS-P0603LF-1001-B
Resistor	PWC	POP free	PWC0603-2K0JI
Resistor	PWP	POP free	PWP04-200RJB048
Resistor	QS001	Unchecked	GUS-QS001LF-03-56R0-K
Resistor	QSOP	Unchecked	GUS-QS0ALF-01-1002-FB
Resistor	QSOP-C	Unchecked	GQ0ALF021002BAT
Resistor	R08 / R10 / R15	See RHVD	R08CD-100M/100KFD
Resistor	R2R	Unchecked	GUS-QS009LF-01-1002-G
Resistor	RC	POP free	RC55V-31K6BI or RC55LFV3162BA
Resistor	RCP	POP free	RC55PV-31K6BI
Resistor	RHVD	POP free	R08CD-100M/100KFD
Resistor	SC3	POP free	SC3-33RFI or SCW-SC3LF-33R0F
Resistor	SIP	See 4700	SIP-4701-03-1001-F-B
Resistor	SIP-U	Unchecked	SIP-U4709-12-1001-Q-S-2
Resistor	SOIC	Unchecked	GUS-SL0ALF-01-1002-F-B
Resistor	SOIC-C	Unchecked	GL0ALF021002BAT
Resistor	SON	Unchecked	SON-N954LF-01-1002-FB
Resistor	SON-U	Unchecked	SON-UN959LF-03-1001-B-S-2
Resistor	SOT143	Unchecked	SOT143-A002-FB or SOT-SOT143LF-03-A002-FB

Resistor	SOT23	Unchecked	SOT23-3K3-1K0FB or SOT-SOT23LF-03-1001-3301-FB
<i>Resistor</i>	<i>SOT-DIV23</i>	<i>See DIV23</i>	<i>SOT-DIV23LF-03-1001-3301-FB</i>
Resistor	SP20/SP20F	Unchecked	SP20-180RJI or SP2018000JLF
Resistor	SPH/SPF	Unchecked	SPF-150RJI or SPF1500JLF
Resistor	SPP	Unchecked	SPP1UL4700JLF
Resistor	SQM/CVF/CVW	Unchecked	SQM10-4K7JB1 or CVF104701JLF
Resistor	SQP/CAF/CAW	Unchecked	SQP2-4K7JB5 or CAF24701JLF
Resistor	T40	Unchecked	T43D-4G7JI or 424371-4M7JI
Resistor	TFHP	Unchecked	TFHP1206D-1K54FT5
<i>Resistor</i>	<i>TJC</i>	<i>POP free</i>	<i>TJC0505LF-T3</i>
Resistor	<i>TKC-HTC</i>	<i>See HTC</i>	<i>TKC-HTC1206LF-100RF</i>
Resistor	TS005	Unchecked	GUS-TS005-4462
Resistor	TSSOP	Unchecked	GUS-TS0ALF-01-1002-FB
Resistor	ULR	POP free	ULR1-R0015FT2 or ULRB12512R0015FLFSLT
<i>Resistor</i>	<i>ULW</i>	<i>POP free</i>	<i>ULW2-33RJA25</i>
<i>Resistor</i>	<i>VB160x / VB190x</i>	<i>See 1600/1900</i>	<i>VB1600-10RJI</i>
Resistor	<i>VC160x / VC190x</i>	<i>See 1600/1900</i>	<i>VC1600-10RJI</i>
<i>Resistor</i>	<i>VRW</i>	<i>POP free</i>	<i>VRW25-1M2JI</i>
<i>Resistor</i>	<i>W0402 / W0603 / W0805 / W1206</i>	<i>See PFC</i>	<i>W0402R-01-1K0BI</i>
Resistor	<i>W0603HT / W0805HT / W1206HT</i>	<i>See PFC-HT</i>	<i>W0603HT-01-1K0F</i>
Resistor	W20	POP free	W21-3K3JI
Resistor	W30	POP free	W31-1K0FA1
Resistor	WA80	POP free	WA82-47RJI
Resistor	WA80F	POP free	WA84F-15RJI
Resistor	WA80Z	POP free	WA83Z-1K5JI
Resistor	WCM	Unchecked	WCM0204-2K49GT3
Resistor	WCR	POP free	WCR0201-10KFI or WCR-WCR0201LF-1002-F-PLT
Resistor	WDBR	Unchecked	WDBR1/2-100RKIW
Resistor	WDBR-UL	Unchecked	WDBR1UL-100RKIW
Resistor	WH	POP free	WH10-100RJI
Resistor	WHPC	POP free	WHPC0508X-10KFT5
Resistor	WHS	POP free	WHS10-100RJA02
Resistor	WHS-UL	POP free	WHS2UL-100RJA25
Resistor	WIN	POP free	WINT0402LF031001B3 or WIN-T0402LF-03-1001-B
Resistor	WL4	POP free	WL4-R005JI
Resistor	WMHP	POP free	WMHP100-10KJ
Resistor	WMO-S	POP free	WMO1/2S-1K5JA5
Resistor	WNCR	Unchecked	WNCR164-4K7JI
Resistor	WPRT	Unchecked	WPRT10AB-1K2JB440
Resistor	WP-S	POP free	WP1S-100RJA5
Resistor	WPYP	Unchecked	WPYP10-100KFB
Resistor	WRM	POP free	WRM0102C-1K0FI
Resistor	WRM-HP	POP free	WRM0204HPC-2K49FT3
Resistor	WRM-HV	POP free	WRM0204HV-1M0FT3
Resistor	WSHR	Unchecked	WSHR1/2-100RKIW
Resistor	WSM	POP free	WSM2-1K0FI or WSM21001FLFTR
Resistor	WSMHP	POP free	WSMHP20-10KJ

Trimmer	44	POP free	44GR10KLF
Trimmer	64	POP free	64PR10KLF
Trimmer	66	POP free	66PFR10KLF
Trimmer	67	POP free	67PFR10KLF
Trimmer	68	POP free	68PFR10KLF
Trimmer	72	POP free	72PR10KLF
Trimmer	82	POP free	82PR10KLF
Trimmer	84	POP free	84PR10KLF
Trimmer	89	POP free	89PR10KLF
Trimmer	90	POP free	90PR10KLF
Trimmer	91	POP free	91AR10KLF
Turn Counting Dial	2606	POP free	2606