



## Stackpole Electronics Inc. Lead Free / RoHS Position

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS). As part of this ongoing program, we will periodically update this document with the status regarding the availability of our lead-free components. Most of our products are either currently lead-free or are available as lead-free. Stackpole will continue to pursue lead-free alternatives for all our products. Our lead-free part numbers are also fully RoHS compliant.

<i>Package / Termination Type</i>	<i>Product Series</i>	<i>Description</i>	<i>Currently Lead Free / RoHS Compliant?</i>	<i>Alternate RoHS Compliant Version Available?</i>	<i>Alternate RoHS Compliant Part Number</i>	<i>Lead Free Termination Composition</i>
SMD	RMC	General Purpose Thick Film Chip	NO *	YES	RMCF	100% Matte Sn over Ni
	HMC	High Resistance Value Chip	YES	-	-	100% Matte Sn over Ni
	RGC	Semi-Precision Chip	YES	-	-	100% Matte Sn over Ni
	HVC	High Voltage Chip	NO	Sep. 2005	-	100 % Matte Sn over Ni
	FCR	Thick Film Trimmable Chip	YES	-	-	100% Matte Sn over Ni
	RNC	Thin Film, Nichrome, Precision	NO	YES	RNCF	100% Matte Sn over Ni
	RAV	Thick Film, Array, Convex	NO *	YES	RAVF	100% Matte Sn over Ni
SIP	RAC	Thick Film, Array, Concave	NO *	YES	RACF	100% Matte Sn over Ni
	RAF	Thick Film, Array, Flat Termination	YES	-	-	100% Matte Sn over Ni
SMD	LC	Thick Film Resistor Network	NO	NO	N/A	-
	HVD	High Voltage Leaded Resistors	NO	Sep. 2005	-	95.5/3.8/0.7 Sn/Ag/Cu
SMD	CSR	Current Sensing Chip	NO	YES	CSF	100% Matte Sn over Ni
Radial / Special	BR	Open Air, Bare Element Current Sense	YES	-	-	100% Matte Sn
Axial / Kelvin	MR/TMR	Low Resistance - Current Sensing	YES	-	-	100% Matte Sn
Special	HLD	High Current Shunt / Sensing	YES	-	-	100% Matte Sn
Axial	RN/RNM	General Purpose Metal Film	NO	YES	RNF/RNMF	99.3/0.7 Sn/Cu or 100% Sn
	UP	Ultra Precision, Metal Film	NO	NO	N/A	-
	RS/RSM	Metal Oxide	NO	YES	RSF/RSMF	99.3/0.7 Sn/Cu
	ASR	Anti-Surge	YES	-	-	99.3/0.7 Sn/Cu
	SPR	Discharge Path	YES	-	-	99.3/0.7 Sn/Cu
	RSPF/RSPL	Flameproof Power	YES	-	-	99.3/0.7 Sn/Cu
	FRN	Fusing	YES	-	-	99.3/0.7 Sn/Cu
	JW	Jumper Wire	YES	-	-	100% Matte Sn
	CD	Zero-Ohm	YES	-	-	100% Matte Sn
SMD	RC	Carbon Composition	YES	-	-	100% Matte Sn
	CF	Carbon Film	YES	-	-	100% Matte Sn
SMD	SM	Wirewound, Molded Package	YES	-	-	100% Matte Sn
	SMX	Metal Oxide, Molded Package	YES	-	-	100% Matte Sn
Special	KAL	General Purpose, Aluminum Housed	YES	-	-	100% Matte Sn
Axial	WRF	Consumer Grade - Conformal Coated Wirewound	YES	-	-	100% Matte Sn
	GP	Commercial Grade WW, conformal coated	YES	-	-	100% Matte Sn
	WW/MWW	General Purpose WW conformal coated	YES	-	-	100% Matte Sn
	NSP	Ceramic Housed - Consumer Grade	YES	-	-	100% Matte Sn
Special	NSZ	Specialty Lead, Ceramic Housed - Consumer Grade	YES	-	-	100% Matte Sn

\* These products are now shipping as lead-free, RoHS compliant to our customers in Asia (Japan, Taiwan, China, Singapore etc.).

<i>Package / Termination Type</i>	<i>Product Series</i>	<i>Description</i>	<i>Currently Lead Free / RoHS Compliant?</i>	<i>Alternate RoHS Compliant Version Available?</i>	<i>Alternate RoHS Compliant Part Number</i>	<i>Lead Free Termination Composition</i>
<b>Axial</b>	<b>CB</b>	General Purpose, Ceramic Housed	<b>YES</b>	-	-	<b>100% Matte Sn</b>
<b>PC Mount</b>	<b>PCB</b>	General Purpose, C.H., PC mount	<b>YES</b>	-	-	<b>100% Matte Sn</b>
<b>Axial</b>	<b>LCB</b>	General Purpose, C.H., Low resistance	<b>YES</b>	-	-	<b>100% Matte Sn</b>
<b>Special / 4 Leads</b>	<b>TCB</b>	General Purpose, C.H., Low Resistance, 4 terminal	<b>YES</b>	-	-	<b>100% Matte Sn</b>
<b>Radial</b>	<b>VM/MVM/ LVM/WVM</b>	General Purpose, Ceramic Housed, Vertical Mount	<b>YES</b>	-	-	<b>100% Matte Sn</b>
<b>Axial</b>	<b>EL/CEL</b>	Commercial Power	<b>YES</b>	-	-	<b>100% Matte Sn</b>
<b>Special</b>	<b>SHP</b>	Thick Film on Metal Technology	<b>NO</b>	<b>Sep. 2005</b>	<b>Same</b>	-
<b>SMD</b>	<b>PV</b>	Plastic Encapsulated Varistor	<b>YES</b>	-	-	<b>Tinned Cu</b>
	<b>DV, AV, ZV, ZVX, ZVE</b>	Multilayer Varistor Chips	<b>YES</b>	-	-	<b>AgPd</b>
<b>Leaded</b>	<b>CV, CV+, SV, ZV</b>	Disc Varistors	<b>NO</b>	<b>Mid - 2005</b>	<b>Same</b>	<b>100% Matte Sn</b>
	<b>ZV, AV, MV, OV</b>	Through-hole Varistors	<b>NO</b>	<b>Mid - 2005</b>	<b>Same</b>	<b>100% Matte Sn</b>

\* These products are now shipping as lead-free, RoHS compliant to our customers in Asia (Japan, Taiwan, China, Singapore etc.).