



SAP PART NUMBERING MANUAL

VISHAY DALE NETWORK/ARRAY RESISTORS



VISHAY DALE NETWORKS

CRCA

SAP Part Number

CRCA12E081103121R

CRCA12E081472220E

SAP Description

CRCA12E0801103J121M RB8

CRCA12E0801472J220M E e3

MODEL	SIZE	TERMINAL	PIN COUNT	SCHEMATIC	RESISTANCE VALUE	CAPACITANCE VALUE	PACKAGING	SPECIAL
4 digits	2 digits	1 digit	2 digits	1 digit	3 digits	3 digits	1 digit	1 digit
CRCA	12	S = Convex, square corner E = Convex, scaloped corner	08 10	1 = 01 2 = 02 3 = 03 0 = Custom, per TPI	3-digit numeric code (in ohms) where the first two digits are the significant figures and the last digit is the multiplier. Tolerance is $\pm 5\%$ (J) Check data sheet for available value range	3-digit numeric code (in picofarads) where the first two digits are the significant figures and the last digit is the multiplier. Tolerance is $\pm 20\%$ (M) Check data sheet for available value range	STANDARD LEAD FREE CODES E = Reel pack, 12mm Embossed tape, 8mm pocket pitch, 7" reel STANDARD TIN/LEAD CODES R = Reel pack, 12mm Embossed tape, 8mm pocket pitch, 7" reel (RB8) NON-STANDARD TIN/LEAD CODES M = Heat seal pack (M11) S = per TPI (S51)	Dash #'s 1 thru 9 as applicable Blank = Standard



VISHAY DALE NETWORKS

CS201

SAP Part Number

20104D1C222K5P

20110D3X103K5E

20108D0S000SSP3

20108D1C102K5P12

SAP Description

CS20104D1C222K5 P03

CS20110D3X103K5 E e1

CS201-08D00-S3 P03

CS20108D1C102K5-S12 P03

MODEL	PIN COUNT	PACKAGE	SCHEMATIC	CAP. DIELECTRIC	CAP. VALUE	CAP. TOLERANCE	CAPACITOR VOLTAGE	PACKAGING	SPECIAL
3 digits	2 digits	1 digit	1 digit	1 digit	3 digits	1 digit	1 digit	1 digit	Up to 3 digits
201 = CS201	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18	D B (non-std – must be used with Special dash)	1 = Bussed, pin “1” common (01) 3 = Isolated (03; even pin counts only) 4 = Bussed, pin “1” and “n” common (04) 0 = Custom, per TPI (00)	C = C0G X = X7R S = Special	3-digit numeric code (in picofarads) where the first two digits are the significant figures and the last digit is the multiplier. 000 = Special Check data sheet for available value range	K = ±10% M = ±20% S = Special, per TPI	5 = 50V 1 = 100V S = Special, per TPI	STANDARD LEAD FREE CODES E = Bulk pack STANDARD TIN/LEAD CODES P = Bulk pack (P03) NON-STANDARD TIN/LEAD CODES M = Heat seal pack (M11) S = per TPI (S51)	1 thru 999 as required Blank = Standard Examples: 1 = S1 2 = S2 3 = S3 999 = S999



VISHAY DALE NETWORK/ARRAY RESISTORS

CS206

SAP Part Number

20608MX151J103KP
20608TC102J101KE
20608SS000S000SPAA
20608TC102J101KEAB

SAP Description

CS20608BMX151J103K P03
CS20608CTC102J101K E e1
CS20608C-00-S1 P03
CS20608CTC102J101K-S2 E e1

MODEL 3 digits	PIN COUNT 2 digits	PACK. & SCHEMATIC 1 digit	CAP. DIELECTRIC 1 digit	RESISTANCE VALUE 3 digits	RESISTANCE TOL. 1 digit	CAPACITANCE VALUE 3 digits	CAPACITANCE TOLERANCE 1 digit	PACKAGING 1 digit	SPECIAL 2 digits
206 = CS206	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18	E = BE M = BM A = EA T = CT S = Special (package height always "C")	C = C0G X = X7R S = Special, per TPI	3-digit numeric code (in ohms) where the first two digits are the significant figures and the last digit is the multiplier. 000 = Special (always null) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special (always null)	3-digit numeric code (in picofarads) where the first two digits are the significant figures and the last digit is the multiplier. 000 = Special (always null) Check data sheet for available value range	K = $\pm 10\%$ M = $\pm 20\%$ S = Special, per TPI	STANDARD LEAD FREE CODES E = Bulk pack STANDARD TIN/LEAD CODES P = Bulk pack (P03) NON-STANDARD TIN/LEAD CODES M = Heat seal pack (M11) S = per TPI (S51)	AA to ZZ as needed Blank = Standard AA = S1 AB = S2 AC = S3 ZZ = S529 Excludes characters I, O, and X.



VISHAY DALE NETWORKS

CSC (01, 03, 00)

SAP Part Number
CSC06C0347R0GDA
CSC10A011M00GEK

SAP Description
CSC06C-03 47 2% D03
CSC10A-01 1M 2% EK e3

MODEL 3 digits	PIN COUNT 2 digits	PACK. HEIGHT 1 digit	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 2 digits	SPECIAL Up to 3 digits
CSC	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18	STANDARD A = Low profile B = Medium profile NON-STANDARD C = High profile	STANDARD 01 = Bussed, pin "1" common 03 = Isolated (even pin counts only) NON-STANDARD 02 = Combined group resistors 04 = Bussed, pin "1" and "n" common 06 = Bussed, middle pin common (odd pin counts only) 07 = Bussed, pin "n" common 00 = Custom, per TPI	R = ohms K = kilohms M = Megohms 0000 = 0 ohm jumper or special (value per TPI) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI Z = 0 ohm jumper	STANDARD LEAD FREE CODES EK = Bulk pack NON-STANDARD LEAD FREE CODES EJ = Tube pack NON-STANDARD TIN/LEAD CODES PA = Bulk pack (P03) MA = Heat seal pack (M11) DA = Tube pack (D03) WE = Tray pack (T12) SL = Custom pack, per TPI (S51)	Dash #'s 1 thru 999 as applicable Blank = Standard



VISHAY DALE NETWORKS

CSC (05)

SAP Part Number

CSC10A05500BGDA

CSC06B05102AGEK

CSC08A05131AGPA26

SAP Description

CSC10A-05-820/131G 2% D03

CSC10A-05-152/332G 2% EK e3

CSC08A-05-221/331G-S26 P03

MODEL 3 digits	PIN COUNT 2 digits	PACK. HEIGHT 1 digit	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 2 digits	SPECIAL Up to 3 digits
CSC	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18	STANDARD A = Low profile B = Medium profile NON-STANDARD C = High profile	05 = Dual Terminator	Impedance code, 2 significant digits 3rd is multiplier, 4th character is an alpha modifier	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI	STANDARD LEAD FREE CODES EK = Bulk pack NON-STANDARD LEAD FREE CODES EJ = Tube pack NON-STANDARD TIN/LEAD CODES PA = Bulk pack (P03) MA = Heat seal pack (M11) DA = Tube pack (D03) WE = Tray pack (T12) SL = Custom pack, per TPI (S51)	Dash #'s 1 thru 999 as applicable Blank = Standard



VISHAY DALE NETWORKS

CSRC

SAP Part Number
CSRC07B00S01XXXXXP

SAP Description
CSRC-07B-00-S1 P03

Note: For standard CSRC parts, use the CS206 series

MODEL	PIN COUNT	PACK. HEIGHT	SCHEMATIC	RESISTANCE VALUE	RESISTANCE TOLERANCE	CAP. VALUE	CAP. TOLERANCE	PACKAGING
4 digits	2 digits	1 digit	2 digits	3 digits	1 digit	3 digits	1 digit	1 digit
CSRC	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18	B = Medium profile C = High profile	00 = Special	3 character dash # (S01 thru S99 as applicable) Example S01 = S1 NOTE * Specials will NOT reflect specific values. Use "X" to fill SAP P/N voids.	X = Special	XXX = Special	X = Special	STANDARD LEAD FREE CODES E = Bulk pack STANDARD TIN/LEAD CODES P = Bulk pack (P03) NON-STANDARD TIN/LEAD CODES M = Heat seal pack (M11) S = per TPI (S51)



VISHAY DALE NETWORKS

CZA/CZB

SAP Part Number

CZA06S04150300HRT
CZA04S04015050LEA
CZB06S04090050HEA

SAP Description

CZA06S04150300H RG5
CZA04S04015050L EA e3
CZB06S04090050H EA e3

MODEL	SIZE	TERMINAL	PIN COUNT	ATTENUATION	IMPEDANCE	TOLERANCE	PACKAGING	SPECIALS
3 digits	2 digits	1 digit	2 digits	3 digits	3 digits	1 digit	2 digits	1 digit
CZA= Unbalanced pi filter CZB = Balanced Pi filter	04 (CZA only) 06	S = Convex, square corner	04	005 = 0.5 dB 010 = 1 dB 015 = 1.5 dB 020 = 2 dB 030 = 3 dB 040 = 4 dB 050 = 5 dB 060 = 6 dB 070 = 7 dB 080 = 8 dB 090 = 9 dB 100 = 10 dB 110 = 11 dB 120 = 12 dB 130 = 13 dB 140 = 14 dB 150 = 15 dB 160 = 16 dB 170 = 17 dB 180 = 18 dB 190 = 19 dB 200 = 20 dB 000 = 0 dB or 0 ohm jumper	050 = 50 ohm 075 = 75 ohm 100 = 100 ohm 300 = 300 ohm 600 = 600 ohm 000 = 0 ohm jumper NOTE: For 0 dB part, use impedance of 50 ohm to 600 ohm, not "000"	H = ± 0.5 dB (for attenuations of 6 dB or greater) L = ± 0.3 dB (for attenuations less than 6 dB) Z = 0 ohm jumper	STANDARD LEAD FREE CODES EA = Reel pack, std taping, 7" reel STANDARD TIN/LEAD CODES TD = Reel pack, 8mm paper tape, 2mm pocket pitch, 7" reel (RT7, 04- size only) RT = Reel pack, 8mm embossed tape, 4mm pocket pitch, 7" reel (RG5, 06-size only)	Dash #'s 1 thru 9 as applicable Blank = Standard



VISHAY DALE NETWORKS

DFM (Military M83401/03)

SAP Part Number

M8340103MA001GJD05

M8340103K1502FAD05

M8340103M47R0JBD05

SAP Description

DFM14-15-820/131G 2% M M8340103MA001GJ D05

DFM14-12 1.5K 1% K M8340103K1502FA D05

DFM14-11 47 2% M M8340103M47R0JB D05

MILITARY STYLE 6 digits	MIL. SPEC. SHEET 2 digits	TC 1 digit	VALUE 4 digits	TOLERANCE 1 digit	SCHEMATIC 1 digit	PACKAGING 3 digits
M83401	03 = DFM14	K = $\pm 100\text{ppm}/^\circ\text{C}$ M = $\pm 300\text{ppm}/^\circ\text{C}$	For A and B schematics: 4-digit numeric code where the first three digits are the significant figures and the last digit is the multiplier. For values below 100 ohms, an "R" is used as a decimal placeholder. For J schematic: Per std MIL spec resistance designator table (All are in format "Axxx") (NOTE: P/N FORMAT PER MIL-PRF-83401) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$	A = Isolated, pin "n" common (11) B = Bussed (12) J = Dual Terminator (15)	STANDARD TIN/LEAD CODES D05 = Tube pack STANDARD TIN/LEAD SLDC CODES DSL = Tube pack, SLDC NON-STANDARD TIN/LEAD CODES S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic S51 = Custom pack, per TPI M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S07, S11, S30 special pack available



VISHAY DALE NETWORKS

DFP

SAP Part Number

DFP141210K0GD05

DFP1611470RGE05

DFP141149R9FD0560

SAP Description

DFP14-12 10K 2% D05

DFP16-11 470 2% E05 e1

DFP14-11-S60 49R9 1% D05

MODEL 3 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 3 digits	SPECIAL Up to 3 digits
DFP	14 16	STANDARD 11 = Isolated 12 = Bussed, pin "n" common NON-STANDARD 10 = Custom, per TPI	R = ohms K = kilohms M = Megohms 0000 = 0 ohm jumper XXXX = Special (value per TPI) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI Z = 0 ohm jumper	STANDARD LEAD FREE CODES E05* = Tube pack STANDARD TIN/LEAD CODES D05 = Tube pack NON-STANDARD TIN/LEAD CODES S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic S51 = Custom pack, per TPI M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S07, S11, S30 special pack available * Leadfree version not currently released	Dash #'s 1 thru 999 as applicable Blank = Standard



VISHAY DALE NETWORKS

DFRC

SAP Part Number
DFRC1610D052
DFRC1610E0510

SAP Description
DFRC1610-S2 D05
DFRC1610-S10 E05 e1

MODEL 4 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	PACKAGING 3 digits	SPECIALS 1 to 3 digits
DFRC	16	10 = Custom, per TPI	STANDARD LEAD FREE CODES E05* = Tube pack STANDARD TIN/LEAD CODES D05 = Tube pack NON-STANDARD TIN/LEAD CODES S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic S51 = Custom pack, per TPI M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S07, S11, S30 special pack available * Leadfree version not currently released	1 thru 999 as required Blank = Standard 1 = S1 2 = S2 etc...



VISHAY DALE NETWORKS

MCMB / MCML / MCMU

SAP Part Number

MCMU32

MCML4

MCMB15

MCMB01S9

SAP Description

MCMU-S32 S51

MCML-S4 S51

MCMB-15 S51

MCMB-01-S9 S51

Standard packaging code S51 for all part numbers

MODEL 4 digits	VERSION Up to 5 digits
MCMB MCML MCMU	1 thru 999 (for all models) and 01S1 thru 04S11 (for MCMB only) as required 1 = S1 2 = S2 01S9 03S11 04S9



VISHAY DALE NETWORKS

MDM (Military M83401/01, /02)

SAP Part Number

M8340102M1003FBD04

M8340101KA001GJD04

SAP Description

MDM16-01 100K 1% M M8340102M1003FB D04

MDM14-05-820/131G 2% K M834010KA001GJ D04

MILITARY STYLE 6 digits	MIL. SPEC. SHEET 2 digits	TC 1 digit	VALUE 4 digits	TOLERANCE 1 digit	SCHEMATIC 1 digit	PACKAGING 3 digits
M83401	01 = MDM14 02 = MDM16	K = $\pm 100\text{ppm}/^{\circ}\text{C}$ M = $\pm 300\text{ppm}/^{\circ}\text{C}$	For A and B schematics: 4-digit numeric code where the first three digits are the significant figures and the last digit is the multiplier. For values below 100 ohms, an "R" is used as a decimal placeholder. For J schematic: Per std MIL spec resistance designator table (All are in format "Axxx") (NOTE: P/N FORMAT PER MIL-PRF-83401) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$	A = Isolated (03) B = Bussed, pin "n" common (01) J = Dual Terminator (05)	STANDARD TIN/LEAD CODES D04 = Tube pack STANDARD TIN/LEAD SLDC CODES DSL = Tube pack, SLDC NON-STANDARD TIN/LEAD CODES D02 = Tube pack, plugged S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S10, S11, S30 special pack available



VISHAY DALE NETWORKS

MDP (01, 03, 00)

SAP Part Number

MDP160112K7FD04

MDP1405121CGE04

MDP16030000ZD04

MDP1400XXXXSD04104

SAP Description

MDP16-01 12.7K 1% D04

MDP14-05- 221/271G 2% E04 e1

MDP16-03 0 OHM JUMPER D04

MDP14-00-S104 D04

MODEL 3 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 3 digits	SPECIAL Up to 3 digits
MDP	14 16 18	STANDARD 01 = Bussed, pin "n" common 03 = Isolated NON-STANDARD 00 = Custom, per TPI	R = ohms K = kilohms M = Megohms 0000 = 0 Ohm Jumper XXXX = Special (value per TPI) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ S = Special, per TPI Z = 0 Ohm Jumper	STANDARD LEAD FREE CODES E04 = Tube pack STANDARD TIN/LEAD CODES D04 = Tube pack NON-STANDARD TIN/LEAD CODES D02 = Tube pack, plugged S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic S51 = Custom pack, per TPI M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S10, S11, S30 special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 399 = Backside soldering



VISHAY DALE NETWORKS

MDP (45, 46)

SAP Part Number

MDP1646D04

MDP1645E04

MDP1645D04122

SAP Description

MDP16-46 D04

MDP16-45 E04 e1

MDP16-45-S122 D04

MODEL 3 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	PACKAGING 3 digits	SPECIAL Up to 3 digits
MDP	16	45 = TTL/ECL Translator 46 = Signal Terminator	STANDARD LEAD FREE CODES E04 = Tube pack STANDARD TIN/LEAD CODES D04 = Tube pack NON-STANDARD TIN/LEAD CODES D02 = Tube pack, plugged S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic S51 = Custom pack, per TPI M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S10, S11, S30 special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 399 = Backside soldering



VISHAY DALE NETWORKS

MDP (05)

SAP Part Number
MDP1405121CGD04
MDP1605990AGE04

SAP Description
MDP14-05-221/271G 2% D04
MDP16-05-161/261G 2% E04 e1

MODEL 3 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 3 digits	SPECIAL Up to 3 digits
MDP	14 16 18	05 = Dual Terminator	Impedance code, 2 significant digits, 3rd is multiplier, 4th character is an alpha modifier	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ S = Special, per TPI	STANDARD LEAD FREE CODES E04 = Tube pack STANDARD TIN/LEAD CODES D04 = Tube pack NON-STANDARD TIN/LEAD CODES D02 = Tube pack, plugged S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic S51 = Custom pack, per TPI M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S10, S11, S30 special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 399 = Backside soldering



VISHAY DALE NETWORKS

MDRC

SAP Part Number

MDRC1641500GE04
MDRC1600XXXSD0410
MDRC1600X03SD045
MDRC1600500GD0415

SAP Description

MDRC-1641-500G E04 e1
MDRC-1600-S10 D04
MDRC-1600-03-S5 D04
MDRC-1600-500G-S15 D04

MODEL 4 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	VALUE 3 digits	TOLERANCE 1 digit	PACKAGING 3 digits	SPECIAL Up to 3 digits
MDRC	16	41 42 00	(value in ohms) 3-digit numeric code where the first two digits are the significant figures and the last digit is the multiplier. If no value/value code displayed, use "X" as filler Check data sheet for available value range	G = $\pm 2\%$ S = Special, per TPI	STANDARD LEAD FREE CODES E04 = Tube pack STANDARD TIN/LEAD CODES D04 = Tube pack NON-STANDARD TIN/LEAD CODES D02 = Tube pack, plugged S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic S51 = Custom pack, per TPI M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S10, S11, S30 special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard Example: 1 = S1 10 = S10



VISHAY DALE NETWORKS

MSM (Military M83401/04, /05, /06, /07, /08, /09)

SAP Part Number

M8340107K1003GCD03

M8340104KA001GHD03

SAP Description

MSM06A-01 100K 2% K M8340107K1003GC D03

MSM06C-05-820/131G 2% K M8340104KA001GH D03

MILITARY STYLE 6 digits	MIL. SPEC. SHEET 2 digits	TC 1 digit	VALUE 4 digits	TOLERANCE 1 digit	SCHEMATIC 1 digit	PACKAGING 3 digits
M83401	04 = MSM06C 05 = MSM08C 06 = MSM10C 07 = MSM06A 08 = MSM08A 09 = MSM10A	K = $\pm 100\text{ppm}/^{\circ}\text{C}$ M = $\pm 300\text{ppm}/^{\circ}\text{C}$	For C and G schematics: 4-digit numeric code where the first three digits are the significant figures and the last digit is the multiplier. For values below 100 ohms, an "R" is used as a decimal placeholder. For H schematic: Per std MIL spec resistance designator table (All are in format "Axxx") (NOTE: P/N FORMAT PER MIL-PRF-83401) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$	C = Bussed, pin "1" common (01) G = Isolated (03) H = Dual Terminator (05)	STANDARD TIN/LEAD CODES D03 = Tube pack STANDARD TIN/LEAD SLDC CODES DSL = Tube pack, SLDC NON-STANDARD TIN/LEAD CODES D29 = Tube pack, parts packaged side-by-side S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S30 special pack available



VISHAY DALE NETWORKS

MSM (Military M83401/18, /19)

SAP Part Number

M8340118KA002GXD03

M8340119KA007GXD03

SAP Description

MSM06A-18-S2 M8340118KA002GX D03

MSM08A-19-S7 M8340119KA007GX D03

MILITARY STYLE 6 digits	MIL. SPEC. SHEET 2 digits	TC 1 digit	VALUE 4 digits	TOLERANCE 1 digit	SCHEMATIC 1 digit	PACKAGING 3 digits
M83401	18 = MSM06A-18 19 = MSM08A-19	K = $\pm 100\text{ppm}/^\circ\text{C}$	Per std MIL spec resistance designator table (All are in format "Axxx") (Value codes "Axxx" = the dash number, as in examples below) A001 = S1 A003 = S3 A004 = S4 A005 = S5 and so on... (NOTE: P/N FORMAT PER MIL-PRF-83401) The M8340118... series is currently only -S1 and -S2. The M8340119... series is currently -S1 through -S12.	G = $\pm 2\%$	X	STANDARD TIN/LEAD CODES D03 = Tube pack STANDARD TIN/LEAD SLDC CODES DSL = Tube pack, SLDC NON-STANDARD TIN/LEAD CODES D29 = Tube pack, parts packaged side-by-side S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S30 special pack available



VISHAY DALE NETWORKS

MSM (Military M83401/24)

SAP Part Number

M8340124K1001GGD03

M8340124K1001GCD03

M8340124MA008JHD03

SAP Description

MSM10A-03-S2 1K 2% K M8340124K1001GG D03

MSM10A-01-S4 1K 2% K M8340124K1001GC D03

MSM10A-05-220/330J-S3 5% M M8340124MA008JH D03

MILITARY STYLE 6 digits	MIL. SPEC. SHEET 2 digits	TC 1 digit	VALUE 4 digits	TOLERANCE 1 digit	SCHEMATIC 1 digit	PACKAGING 3 digits
M83401	24 = MSM10A	K = $\pm 100\text{ppm}/^\circ\text{C}$ M = $\pm 300\text{ppm}/^\circ\text{C}$	For C and G schematics: 4-digit numeric code where the first three digits are the significant figures and the last digit is the multiplier. For values below 100 ohms, an "R" is used as a decimal placeholder. For H schematic: Per std MIL spec resistance designator table (All are in format "Axxx") (NOTE: P/N FORMAT PER MIL-PRF-83401) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$	C = Bussed, pin "1" common (MSM10A-01-S4) G = Isolated (MSM10A-03-S2) H = Dual Terminator (MSM10A-05-S3)	STANDARD TIN/LEAD CODES D03 = Tube pack STANDARD TIN/LEAD SLDC CODES DSL = Tube pack, SLDC NON-STANDARD TIN/LEAD CODES D29 = Tube pack, parts packaged side-by-side S13 = Tube pack, 5 tube/bundle, with antistatic overpack S14 = Tube pack, 1 tube/bundle, with antistatic overpack S15 = Tube pack, individual unit packaging, antistatic M02, M03, M04, M05, M06, M07, M10, M11, M12, M13, M14, M15 heat seal pack available S03, S30 special pack available



VISHAY DALE NETWORKS

MSP (01, 03, 00)

SAP Part Number

MSP06C03470RGDA
MSP08A0310K0FEJ
MSP09A0000000DA11
MSP10A0050R0GDA97

SAP Description

MSP06C-03 470 2% D03
MSP08A-03 10K 1% EJ e1
MSP09A-00-S11 D03
MSP10A-00-S97 50 2% D03

MODEL 3 digits	PIN COUNT 2 digits	HEIGHT 1 digit	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 2 digits	SPECIAL Up to 3 digits
MSP	06 08 09 10 Even count for 03 schematic	STANDARD A = Low profile C = High profile NON-STANDARD B = Medium profile	STANDARD 01 = Bussed, pin "1" common 03 = Isolated NON-STANDARD 02 = Combined group resistors 04 = Bussed, pin "1" and "n" common 00 = Custom, per TPI	R = ohms K = kilohms M = Megohms 0000 = 0 ohm jumper or special (value per TPI) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI Z = 0 ohm jumper	STANDARD LEAD FREE CODES EJ = Tube pack STANDARD TIN/LEAD CODES DA = Tube pack (D03) NON-STANDARD TIN/LEAD CODES DB = Tube pack, parts packaged side-by-side (D29) SB = Tube pack, 5 tube/bundle, with antistatic overpack (S13) S7 = Tube pack, 1 tube/bundle, with antistatic overpack (S14) SC = Tube pack, individual unit packaging, antistatic (S15) SL = Custom pack, per TPI (S51) M2 (M02), M3 (M03), M6 (M06), M7 (M07), ML (M10), MA (M11), MN (M14), MB (M15) heat seal pack available SG (S28), SJ (S30) special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 400 = HSD



VISHAY DALE NETWORKS

MSP (05)

SAP Part Number
MSP08A05101CGDA
MSP10C05141AGEJ

SAP Description
MSP08A-05-181/241G 2% D03
MSP10C-05-271/271G 2% EJ e1

MODEL 3 digits	PIN COUNT 2 digits	HEIGHT 1 digit	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 2 digits	SPECIAL Up to 3 digits
MSP	06 08 10	STANDARD A = Low profile C = High profile NON-STANDARD B = Medium profile	05 = Dual Terminator	Impedance code, 2 significant digits and a multiplier, followed by alpha modifier	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI	STANDARD LEAD FREE CODES EJ = Tube pack STANDARD TIN/LEAD CODES DA = Tube pack (D03) NON-STANDARD TIN/LEAD CODES DB = Tube pack, parts packaged side-by-side (D29) SB = Tube pack, 5 tube/bundle, with antistatic overpack (S13) S7 = Tube pack, 1 tube/bundle, with antistatic overpack (S14) SC = Tube pack, individual unit packaging, antistatic (S15) SL = Custom pack, per TPI (S51) M2 (M02), M3 (M03), M6 (M06), M7 (M07), ML (M10), MA (M11), MN (M14), MB (M15) heat seal pack available SG (S28), SJ (S30) special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 400 = HSD



VISHAY DALE NETWORKS

R1C / R4C / R5C

SAP Part Number
R1C16A20K0BEB14

SAP Description
R1C-16A 20K .1% T-9 B14

MODEL 3 digits	PIN COUNT 2 digits	SCHEMATIC 1 digit	VALUE 4 digits	TOLERANCE 1 digit	TC 1 digit	PACKAGING 3 digits	SPECIAL Up to 3 digits
R1C R4C R5C	06 (R4C & R5C) 08 (R4C & R5C) 16 (R1C only)	A (R1C only) B (R4C & R5C)	R = ohms K = kilohms M = Megohms	B = $\pm 0.1\%$ C = $\pm 0.25\%$ D = $\pm 0.5\%$ F = $\pm 1\%$ G = $\pm 2\%$	Y = $\pm 10\text{ppm}/^{\circ}\text{C}$ (T-13) X = $\pm 15\text{ppm}/^{\circ}\text{C}$ (T-10) E = $\pm 25\text{ppm}/^{\circ}\text{C}$ (T-9) H = $\pm 50\text{ppm}/^{\circ}\text{C}$ (T-2) K = $\pm 100\text{ppm}/^{\circ}\text{C}$ (T-1)	STANDARD LEAD FREE CODES E14* = Bulk pack STANDARD TIN/LEAD CODES B14 = Bulk pack NON-STANDARD TIN/LEAD CODES P13 = Tube pack, antistatic S51 = Custom pack, per TPI * Leadfree version not currently released	Dash #'s 1 thru 999 as applicable Blank = Standard



VISHAY DALE NETWORKS

SOGC (01, 03, 00)

SAP Part Number

SOGC160133R0GRZ

SOGC200312K0GEA

SOGC2001100RGDC399

SOGC200320K0FRZ399

SAP Description

SOGC-1601 33 2% R61

SOGC-2003 12K 2% EA e1

SOGC-2001-S399 100 2% D02

SOGC-2003-S399 20K 1% R61

MODEL 4 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 2 digits	SPECIAL Up to 3 digits
SOGC	16 20	STANDARD 01 = Bussed, pin "n" common 03 = Isolated NON-STANDARD 00 = Custom, per TPI	R = ohms K = kilohms M = Megohms 0000 = 0 ohm jumper or special (value per TPI) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI Z = 0 ohm jumper	STANDARD LEAD FREE CODES EA = Reel pack EJ = Tube pack STANDARD TIN/LEAD CODES RZ = Reel pack (R61) DC = Tube pack (D02) NON-STANDARD TIN/LEAD CODES SB = Tube pack, 5 tube/bundle, with antistatic overpack (S13) S7 = Tube pack, 1 tube/bundle, with antistatic overpack (S14) SC = Tube pack, individual unit packaging, antistatic (S15) SL = Custom pack, per TPI (S51) M2 (M02), M3 (M03), M6 (M06), M7 (M07), ML (M10), MA (M11), MN (M14), MB (M15) heat seal pack available RY (R60), R1 (R97), S9 (S90) reel pack available SJ (S30) special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 399 = Backside soldering



VISHAY DALE NETWORKS

SOGC (05)

SAP Part Number
SOGC1605750BGRZ
SOGC2005561AFEA

SAP Description
SOGC-1605-121/201G 2% R61
SOGC-2005-6340/4991F 1% EA e1

MODEL 4 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING	SPECIAL Up to 3 digits
					2 digits	
SOGC	16 20	05 = Dual Terminator	Impedance code, 3 digits followed by alpha modifier	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI	STANDARD LEAD FREE CODES EA = Reel pack EJ = Tube pack STANDARD TIN/LEAD CODES RZ = Reel pack (R61) DC = Tube pack (D02) NON-STANDARD TIN/LEAD CODES SB = Tube pack, 5 tube/bundle, with antistatic overpack (S13) S7 = Tube pack, 1 tube/bundle, with antistatic overpack (S14) SC = Tube pack, individual unit packaging, antistatic (S15) SL = Custom pack, per TPI (S51) M2 (M02), M3 (M03), M6 (M06), M7 (M07), ML (M10), MA (M11), MN (M14), MB (M15) heat seal pack available RY (R60), R1 (R97), S9 (S90) reel pack available SJ (S30) special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 399 = Backside soldering



VISHAY DALE NETWORKS

SOGC (45, 46)

SAP Part Number

SOGC1645RZ

SOGC2046EA

SAP Description

SOGC-1645 R61

SOGC-2046 EA e1

MODEL	PIN COUNT	SCHEMATIC	PACKAGING	SPECIAL
4 digits	2 digits	2 digits	2 digits	Up to 3 digits
SOGC	16 20	45 = TTL/ECL Translator 46 = Signal Terminator	STANDARD LEAD FREE CODES EA = Reel pack EJ = Tube pack STANDARD TIN/LEAD CODES RZ = Reel pack (R61) DC = Tube pack (D02) NON-STANDARD TIN/LEAD CODES SB = Tube pack, 5 tube/bundle, with antistatic overpack (S13) S7 = Tube pack, 1 tube/bundle, with antistatic overpack (S14) SC = Tube pack, individual unit packaging, antistatic (S15) SL = Custom pack, per TPI (S51) M2 (M02), M3 (M03), M6 (M06), M7 (M07), ML (M10), MA (M11), MN (M14), MB (M15) heat seal pack available RY (R60), R1 (R97), S9 (S90) reel pack available SJ (S30) special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 399 = Backside soldering



VISHAY DALE NETWORKS

SOMC (01, 03, 00)

SAP Part Number

SOMC140133R0GDC

SOMC20031K20FEA

SOMC16030000ZRZ

SOMC140110K0GRZ399

SOMC1603133KFEJ399

SAP Description

SOMC-1401 33 2% D02

SOMC-2003 1.2K 1% EA e1

SOMC-1603 0 OHM JUMPER R61

SOMC-1401-S399 10K 2% R61

SOMC-1603-S399 133K 1% EJ e1

MODEL 4 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 2 digits	SPECIAL Up to 3 digits
SOMC	14 16 20	STANDARD 01 = Bussed, pin "n" common 03 = Isolated NON-STANDARD 00 = Custom, per TPI	R = ohms K = kilohms M = Megohms 0000 = 0 ohm jumper or special (value per TPI) Check data sheet for available value range	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI Z = 0 ohm jumper	STANDARD LEAD FREE CODES EA = Reel pack EJ = Tube pack STANDARD TIN/LEAD CODES RZ = Reel pack (R61) DC = Tube pack (D02) NON-STANDARD TIN/LEAD CODES SB = Tube pack, 5 tube/bundle, with antistatic overpack (S13) S7 = Tube pack, 1 tube/bundle, with antistatic overpack (S14) SC = Tube pack, individual unit packaging, antistatic (S15) SL = Custom pack, per TPI (S51) M2 (M02), M3 (M03), M6 (M06), M7 (M07), ML (M10), MA (M11), MN (M14), MB (M15) heat seal pack available RY (R60), R1 (R97), S9 (S90) reel pack available SJ (S30) special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 399 = Backside soldering



VISHAY DALE NETWORK/ARRAY RESISTORS

SOMC (05)

SAP Part Number
SOMC2005221BGDC
SOMC1405150AFEJ

SAP Description
SOMC-2005-331/681G 2% D02
SOMC-1405-1501/1201F 2% EJ e1

MODEL 4 digits	PIN COUNT 2 digits	SCHEMATIC 2 digits	VALUE 4 digits	TOLERANCE 1 digit	PACKAGING 2 digits	SPECIAL Up to 3 digits
SOMC	14 16 20	05 = Dual Terminator	Impedance code, 3 digits followed by alpha modifier	F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ S = Special, per TPI	STANDARD LEAD FREE CODES EA = Reel pack EJ = Tube pack STANDARD TIN/LEAD CODES RZ = Reel pack (R61) DC = Tube pack (D02) NON-STANDARD TIN/LEAD CODES SA = Tube pack, 5 tube/bundle, with antistatic overpack (S13) S7 = Tube pack, 1 tube/bundle, with antistatic overpack (S14) SB = Tube pack, individual unit packaging, antistatic (S15) SL = Custom pack, per TPI (S51) M2 (M02), M3 (M03), M6 (M06), M7 (M07), ML (M10), MA (M11), MN (M14), MB (M15) heat seal pack available RY (R60), R1 (R97), S9 (S90) reel pack available SF (S30) special pack available	Dash #'s 1 thru 999 as applicable Blank = Standard GENERAL USAGE DASH NUMBERS 399 = Backside soldering



VISHAY DALE NETWORKS

SPM

SAP Part Number

SPM71S51

SPM101S51

SPM33-2002GS51

SPM152-1000FS51

SAP Description

SPM-71 S51

SPM-101 S51

SPM-33 20K 2% S51

SPM-152 100 1% S51

MODEL 3 digits	TYPE 2 or 3 digits	VALUE/TOLERANCE INDICATOR 0 or 1 digit	VALUE 0 or 4 digits	TOLERANCE 0 or 1 digit	PACKAGING 3 digits
SPM	01 thru 99 or 100 thru 999 as required 71 76 100 101	Blank = Standard Use a “-” for P/N’s that call out values / tolerances	Blank = Standard 4-digit numeric code where the first three digits are the significant figures and the last digit is the multiplier. For values below 100 ohms, an “R” is used as a decimal placeholder.	Blank = Standard F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$	STANDARD CODES S51 = Custom pack, per TPI NON-STANDARD CODES M18 = Tray pack, w/ESD R78 = Reel pack, Embossed carrier tape, 7" reel, w/ESD



VISHAY DALE WIREWOUND RESISTORS

HL BRACKETS and ACCESSORIES

SAP Part Number

BRACKET101033E29

BRACKET205

SAP Description

BRACKET101 FOR HLZ033 E29

BRACKET205 B29

MODEL 7 Digits	SIZE 3 Digits	RESISTOR TYPE 3 Digits	PACKAGING 3 Digits
BRACKET	101, 102 or 103 available	010, 011, 012, 020, 025, 026, 050, 051, 060, 065, 080, 100, 120, 130, 160, 175, 225 for all HL types but HLZ 033, 090, 099, 105, 110, 140, 165, 220, 240, 275, 300, 375 for HLZ types	E29 = RoHS Compliant Blank = non-RoHS Compliant
	201, 202, 203, 204, 205, 206 or 208	Not applicable for the 200 Bracket series	
	301, 302 or 303 available	011, 012, 020, 025, 026, 050, 051, 060, 065, 080, 100, 120, 130, 160, 175, 225 for all HL types but HLZ 033, 090, 099, 105, 110, 140, 165, 220, 240, 275, 300, 375 for HLZ types	
MODEL & PACKAGING CODE (RoHS Compliant) 7 Digits		ACCESSORIES DESCRIPTION	
75008602E29		SAP part number for HL Slider 70	
21054401E29		SAP part number for HL Slider 71	
75008603E29		SAP part number for HL Slider 72	
75008604E29		SAP part number for HL Slider 73	
75008605E29		SAP part number for HL Slider 74	



VISHAY DALE NETWORKS

SPMX

SAP Part Number
SPMX183S51

SAP Description
SPMX-183 S51

MODEL 4 digits	TYPE 3 digits	PACKAGING 3 digits
SPMX	001 thru 999 as required 183 192	STANDARD CODES S51 = Custom pack, per TPI



VISHAY DALE NETWORK/ARRAY RESISTORS

TRA

SAP Part Number

TRA06E083100RFTA
TRA06E08310K0GTA
TRA06E08347R5JTA

SAP Description

TRA06E0803 100 1% RT1
TRA06E0803 10K 2% RT1
TRA06E0803 47.5 5% RT1

NOTE: TRA SERIES NO LONGER MANUFACTURED, AVAILABLE ONLY IF INVENTORY EXISTS

MODEL	SIZE	TERMINAL	PIN COUNT	SCHEMATI	VALUE	TOLERANC	PACKAGING	SPECIAL
3 digits	2 digits	1 digit	2 digits	C	4 digits	E	2 digits	2 digits
				1 digit		1 digit		
TRA	06	E	08 10* 16*	1 = 01* 2 = 02* 8 = 20* 3 = 03 9 = 99*	R = decimal K = thousand 54R1 = 54.1 ohm 1K32 = 1,320ohm Check datasheet for available value range	F = ±1.0% G = ±2.0% J = ±5.0%	TA = RT1 (reel)	Dash #'s 1 thru 99 as applicable



VISHAY DALE NETWORKS

MISCELLANEOUS (cont 1 of 3)

SAP Part Number
81018706B29

SAP Description
810187-06 B29 (Part number for 810187-06 reel plug, packaged B29)

PART NUMBER	DASH TYPE	PACKAGING
6 digits	2 digits	3 digits
2xxxxx 8xxxxx	00 thru 99 as applicable	B29, P03, S27, S31, T03, etc.



VISHAY DALE NETWORKS

LOT CHARGES (cont 2 of 3)

SAP Part Number
LOTCHG-DALENETWORK

SAP Description
LOTCHG-DALENETWORK S31

Standard packaging code S31 for all part numbers

CHARGE 7 digits	RESISTOR STYLE Up to 11 digits
LOTCHG-	DALENETWORK= Dale Networks (Material Group FN1)



VISHAY DALE NETWORKS

FAST TRACK PROGRAM (cont 3 of 3)

SAP Part Number
FSTTRK10DALENETS
FSTTRK20DALENETS

SAP Description
FSTTRK10DALENETS S31
FSTTRK20DALENETS S31

Standard packaging code S31 for all part numbers

CHARGE 6 digits	LEAD TIME 2 digits	RESISTOR STYLE 9 digits
FSTTRK	05 = 5 working days 10 = 10 working days 15 = 15 working days 20 = 20 working days	DALENETS = Dale Networks (Material Group FN1)