

Type 3430 Series

Key Features

AEC-Q200 Compliance

Highly reliable multilayer electrode construction

Compatible with all soldering processes

100% CCD inspection



TEConnectivity (TE) is pleased to introduce this new Automotive Grade high power wide terminal chip resistor. The ruthenium based thick film element, along with the wide terminals allow a greater power capability than previously possible with traditional methods. Highly reliable multilayer electrode construction and 100% CCD inspection improve long term stability and reliability.

Characteristics – Electrical

ltem Size	Size Code	Power rating @70°C Jumper Rated Current	Max Operating Voltage	Max Overload Voltage	Resistance Range	Resistance Tolerance	TCR (PPM/°C)
		1W			1R~9R76	1%	±150
0508	A2	IVV	200V	400V	10R ~ 1M	170	±100
		Jumper 5A			0R <10mΩ	-	-
0612	B2	1.5W	200V	400V	1R ~ 1M	1%	±100
0012	ΒZ	Jumper 6A	2000		0R <10mΩ	-	-
		2W		400V	1R ~ 9R76	1%	±150
1020	H2	2 VV	200V		10R ~ 1M	170	±100
		Jumper 10A			0R <10mΩ	-	-
		3W			1R ~ 29R4	1%	±200
1225	A3	200	200V	400V	30R ~ 1M	170	±100
		Jumper 12A			0R <10mΩ	-	-

Operating Temperature Range: -55 ~ 155°C Operating Voltage=V(P*R) or Max. Operating Voltage listed above, whichever is lower. Overload Voltage=2.5*V(P*R) or Max. Overload Voltage listed above, whichever is lower. Tighter tolerances may be available on application

Derating Curve



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Industry Telecommunication

Applications

Automotive

Equipment

Radio and Tape Recorders, TV Tuners

Digital Cameras, Watches, Pocket

Calculators Computers,

Instruments

Medical Equipment



Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of	AS Spec	JIS-C-5201-1 4.8
Resistance (T.C.R.)		IEC-60115-1 4.8
х <i>у</i>		At 25°C/-55°C and 25°C/+125°C,
		25°C is the reference temperature
Short Time Overload	±(1.0%+0.05Ω)	JIS-C-5201-1 4.13
Short Time Overload	1.07010.0322	IEC-60115-1 4.13
		RCWV*2.5 or Max. Overload
		Voltage whichever is lower for 5
		5
		seconds
Insulation Resistance	≥10G	JIS-C-5201-1 4.6
		IEC-60115-1 4.6
		Max. Overload Voltage for 1 minute
Operational Life	±(1.0%+0.10Ω)	MIL-STD-202 Method 108
		Condition D Steady State TA=125°C
		at derated power. Measurement at
		24±4 hours after test conclusion.
Biased Humidity	±(1.0%+0.10Ω)	MIL-STD-202 Method 103
		1000 hrs 85°C/85%RH 10% of
		operating power. (≦100 V)
High Temperature Exposure	±(1.0%+0.05Ω)	MIL-STD-202 Method 108
0 1 1	, ,	at +155°C for 1000 hrs
Board Flex	±(1.0%+0.05Ω)	AEC-Q200-005
Board Hex	_(1.0/0 0.0011)	Bending once for 60 seconds 3mm
Solderability	95% min. coverage	JIS-C-5201-1 4.17
Solderability	5570 mm. coverage	IEC-60115-1 4.17
		J-STD-002
Desistance to Coldening Uset		245±5°C for 3 seconds
Resistance to Soldering Heat	±(0.5%+0.05Ω)	MIL-STD-202 Method 210 260±5°C for 10 seconds
Malta an Dua af	Nie Isweelijker op en	
Voltage Proof	No breakdown or	JIS-C-5201-1 4.7
	flashover	IEC-60115-1 4.7
		1.42 times Max. Operating Voltage
		for 1 minute
Leaching	Individual leaching	JIS-C-5201-1 4.18
	area ≦5% Total	IEC-60068-2-58 8.2.1 260±5°C for
	leaching area $\leq 10\%$	30 seconds
Temperature Cycling	±(0.5%+0.05Ω)	JESD22 Method JA-104
		-55°C to +125°C, 1000 cycles
Mechanical Shock	±(0.25%+0.05Ω)	MIL-STD-202 Method 213
		Wave Form: Tolerance for half sine
		shock pulse. Peak value is 100g's.
		Normal duration (D) is 6.
Vibration	±(0.5%+0.05Ω)	MIL-STD-202 Method 204
		5 g's for 20 min., 12 cycles each of 3
		orientations, 10-2000 Hz
ESD	±(3%+0.05Ω)	AEC-Q200-002
	-(3/0+0.0322)	Human body model: 2KV
Posistanco to Calvanta	No viciblo domogo en	
Resistance to Solvents	No visible damage on	MIL-STD-202 Method 215
	appearance and	Add Aqueous wash chemical -
	marking.	OKEM Clean or equivalent. Do not
		use banned solvents.
Terminal Strength	Not broken	AEC-Q200-006
	1	Force of 1.8kg for 60 seconds.

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Item	Requirement	Test Method
Flammability	No ignition of the	UL-94
	tissue paper or	V-0 or V-1 are acceptable.
	scorching or the	Electrical test not required.
	pinewood board	
Sulfur Test	∆R±1%	EIA-977 (Condition A)
		60±2°C, no power rating for 500
		hrs.

RCWV(Rated Continuous Working Voltage)= $V(P^*R)$ or Max. Operating Voltage whichever is lower. * not include Jumper(0Ω)

Storage Temperature: 15~28°C; Humidity < 80%RH

Shelf Life: 2 years from production date.

Construction and Dimensions



1	Alumina Substrate	(4)	Edge Electrode	Ø	Resistor Layer
0	Bottom Electrode	5	Barrier Layer	8	Primary Overcoat
3	Top Electrode	6	External Electrode	9	Secondary Overcoat

Туре	Size	L (mm)	W (mm)	T (mm)	D1 (mm)	D2 (mm)	Weight (g) 1000 pcs	
3430A2	0508	1.25±0.1	2.00±0.1	0.55±0.1	0.30±0.15	0.30±0.15	5	
Jumper	0308	1.2310.1	2.0010.1	0.55±0.1	0.20±0.15	0.3010.13	5	
3430B2	0612	1.55±0.1	3.00±0.15	0.55±0.1	0.25±0.15	0.40±0.15	8	
Jumper	0012	1.55±0.1	5.00±0.15	0.3310.1	0.2310.13	0.40±0.15	0	
3430H2	1020	2.45±0.15	5.00±0.1	0.60±0.15	0.35±0.20	0.70±0.20	26	
Jumper	1020	2.45±0.15	5.00±0.1	0.00±0.15	0.45±0.20	0.70±0.20	26	
3430A3	1225	3.20±0.20	6.40±0.15	0.65±0.15	0.40±0.20	1.10±0.20	41	
Jumper	1225	5.20±0.20	0.40±0.15	0.05±0.15	0.50±0.20	0.70±0.20	41	

Recommended Land Pattern



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Soldering Condition (Ref. IPC/JEDEC J-STD-020 & J-STD-002)



Reflow Profiles	
Profile Feature	Pb free assembly
Preheat	
Min. Temperature (Tsmin)	150 °C
Max Temperature (Tsmax)	200 °C
Preheating time (ts) from (Tsmin to	60-120 seconds
Tsmax)	
Ramp-up rate (TL to TP)	3 °C/second max.
Liquidous temperature (TL) Time (tL)	217 °C
maintained above TL	60-150 seconds
Min. Peak temperature (TP min)	235°C
Max. Peak temperature (TP max)	260°C
Time (tp) within 5 °C of the specified	30 seconds max.
classification temperature (Tc)	
Ramp-down rate (TP to TL)	6 °C/second max.
Time 25 °C to peak temperature	8 minutes max.



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Packaging

Reel Dimensions and Quantity



Size	Qty	Таре	Reel	ΦA (mm)	ФВ	ФС	W	Т
		Width	Diameter		(mm)	(mm)	(mm)	(mm)
0508	5K	0mm	7 Inch	178.5±1.5	60 ^{+1/-0}	13.0±0.2	9.0±0.5	12.5±0.5
0612	1K	8mm	7 Inch	1/8.511.5	60	13.0±0.2	9.0±0.5	12.5±0.5
1020	4K	12.00.00	7 Inch	178.5±1.5	60 ^{+1/-0}	13.0±0.5	13.0±0.5	15.5±0.5
1225	1K	12mm	7 11101	1/0.311.3	60	13.0±0.5	13.0±0.5	13.3±0.5

Paper Tape Specification



Size	A ±0.10 (mm)	B ±0,20 (mm)	W ±0.20 (mm)	E ±0.10 (mm)	F ±0.05 (mm)	Po ±0.10 (mm)	P ₁ ±0.05 (mm)	P₂ ±0.05 (mm)	ØD _o +0.1 -0 (mm)	T ±0.10 (mm)
0508	1.60	2.40	8.0	1.75	3.5	4.0	4.0	2.0	1.5	0.85
0612	1.90	3.50	8.0	1.75	3.5	4.0	4.0	2.0	1.5	0.85

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Embossed Plastic Tape Specification



Size	A (mm)	B (mm)	W ±0.10 (mm)	E ±0.10 (mm)	F ±0.05 (mm)	Po ±0.05 (mm)	P ₁ ±0.10 (mm)	P₂ ±0.05 (mm)	ØD _o +0.10 (mm)	T ±0.20 (mm)
1020	2.80 ±0.15	5.40 ±0.20	12.00	1.75	5.50	4.00	4.00	2.00	1.55	1.00
1225	3.50 ±0.10	6.70 ±0.10	12.00	1.75	5.50	4.00	4.00	2.00	1.55	1.00

Marking

All models 4 digit marking

Resistance	22.6Ω	487Ω	499ΚΩ
Marking	22R6	4870	4993

How To Order

3430	H2	F	3K3	TE
Common Part	Size	Tolerance	Resistance Value	Packaging
3430 - Automotive Grade Wide Terminal Chip Resistor	A2 - 0508 B2 - 0612 H2 - 1020 A3 - 1225	F — 1%	1R0 - 1Ω 100R - 100Ω 1K0 - 1KΩ 100K - 100KΩ 1M0 - 1MΩ	TDF – 1K Reel TD – 5K Reel (0508 & 0612) TE – 4K Reel (1020 & 1225)

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