An ISO 9001 Company

HIGH TEMP AEC-Q200 INDUCTORS
– EF4P3225ERQ1 SERIES

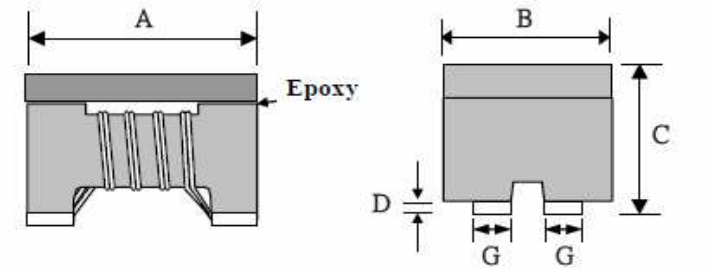
●FEATURE

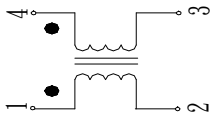
1. For automobile signal line
2. Same as TDK ACT1210 type
3. AEC-Q200 Qualified.

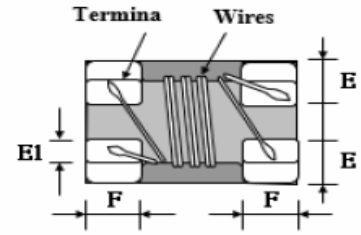
●Applications

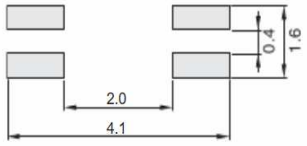
1. CAN-BUS, FlexRay, etc

●Shape and Dimension and Schematics and Land Patterns(mm)









A=3.20±0.20m/m ; B=2.5±0.20m/m ; C=2.50m/m MAX ; D=0.08m/m typ. ; E=1.00m/m typ. ;
E1=0.50m/m typ. ; F=0.60m/m typ. ; G=0.50m/m typ.

●Specification

Dimension in m/m

PART NO.	Common Mode INDUCTANCE (uH) (+50%/-30%)	Common mode Impedance at 10MHz		Rated Current (mA)	Rated Voltage (Vdc)	Insulation Resistance (M ohm)	Withstand Voltage (Vdc)	DC Resistance (max.) (ohm)
		(Ω)min.	(Ω)typ.					
EF4P3225ERQ1-110	11uH at 100KHz	300	550	300	80	10 min	125	0.40
EF4P3225ERQ1-220	22uH at 100KHz	500	1100	250	80	10 min	125	0.50
EF4P3225ERQ1-510	51uH at 100KHz	1000	2600	200	80	10 min	125	0.70
EF4P3225ERQ1-101	100uH at 100KHz	2200	5100	150	80	10 min	125	1.50

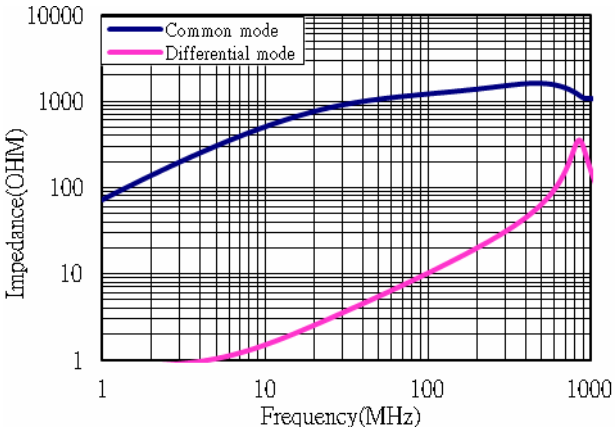
Note1. Measurement ambient temperature of electrical : at 20℃

Note2. Test equipment: HP4291A

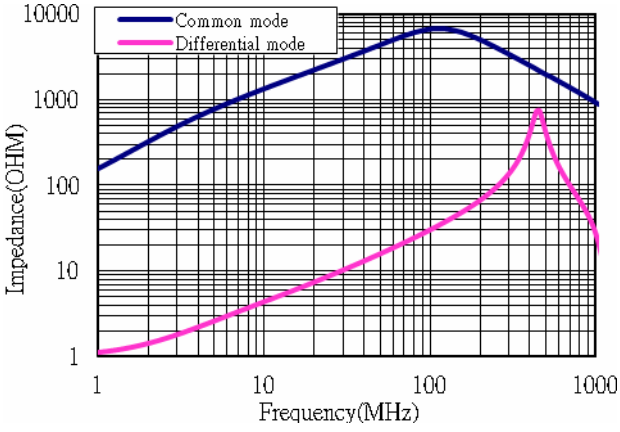
Note3.Packaging: Taping ; Quantity: 2000 Pieces/reel

●EF4P3225ERQ1 (Impedance VS Frequency)

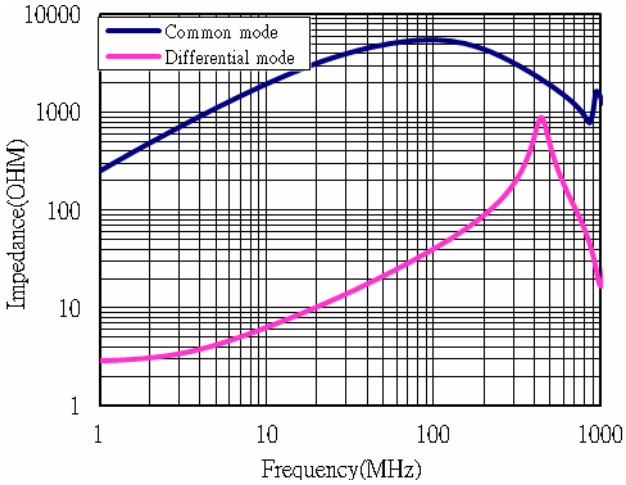
EF4P3225ERQ1-110



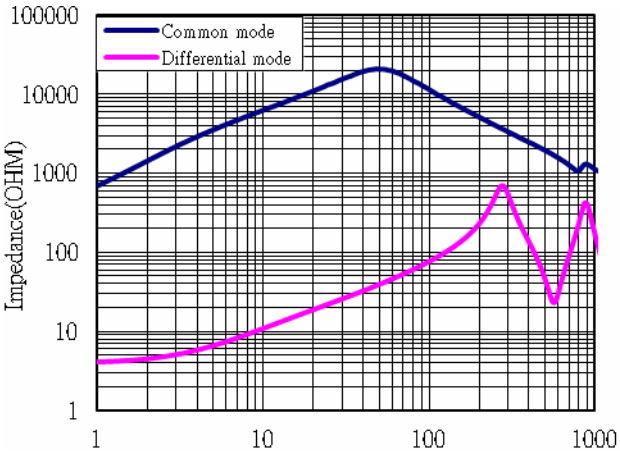
EF4P3225ERQ1-220



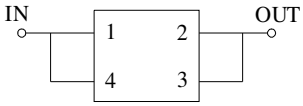
EF4P3225ERQ1-510



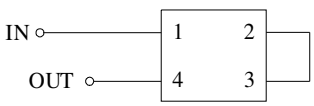
EF4P3225ERQ1-101



●Test circuit



COMMON MODE

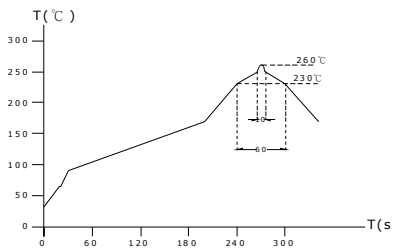


NORMAL MODE

GENERAL CHARACTERISTICS

1. Operating temperature range: -40 TO + 125℃(Includes temperature when the coil is heated)
2. High temperature exposure(storage) refer MIL-STD-202 Method 108: 1000 hrs at rated operating temperature(e.g. 125℃). Part can be stored for 1000 hrs @125℃. Unpowered. Measurement at 24±4 hours after test conclusion.
3. Temperature cycling refer JESD22 Method JA-104: 1000 cycles(-55 TO + 125℃). Measurement at 24±4 hours after test conclusion. 30 min maximum dwell time at each temp. extreme. 1 min. maximum transition time.
4. Biased Humidity refer MIL-STD-202 Method 103: 1000 hours 85℃/85%RH. Unpowered. Measurement at 24±4 hours after test conclusion.
5. Operational Life refer MIL-PRF-27: 1000 hrs. at 125 ℃ tested. Measurement at 24±4 hours after test conclusion.
6. External Visual refer MIL-STD-883 Method 2009: Inspect device construction, marking and workmanship.
7. Physical Dimension refer JESD22 Method JB-100: Verify physical dimensions to the applicable device detail specification.
8. Resistance to Solvents refer MIL-STD-202 Method 215: Add aqueous wash chemical - OKEM clean or equivalent.
9. Mechanical Shock refer MIL-STD-202 Method 213: Figure 1 of Method 213. Condition C.
10. Vibration refer MIL-STD-202 Method 204: 5g;s for 20 minutes, 12 cycles each of 3 orientations. Test from 10-2000 Hz.
11. Resistance to soldering Heat refer MIL-STD-202 Method 210: Condition B No pre-heat of samples. Single wave solder-procedure 2 for SMD and procedure 1 for leaded with solder within 1.5mm of device body.
12. ESD refer AEC-Q200-002 or ISO/DIS 10605: Direct contact discharge 2kV.
13. Solderability refer J-STD-002: For both Leaded & SMD. Magnification 50X. Conditions: Leaded, Method A@235℃,category 3 ; SMD, a)Method B, 4hrs@125℃ dry heat @235℃, b)Method B@215℃ category 3., c)Method D category 3@260℃
14. Electrical Characterization refer spec: Show Min, Max Mean and Standard deviation at room from Min and Max temperature.
15. Flammability refer UL-94: V-0 or V-1 Acceptable.
16. Board Flex refer AEC-Q200-005: 60 sec minimum holding time.
17. Terminal Strength(SMD) refer AEC-Q200-006
18. Reflow profile recommend:

Lead-free heat endurance test



Lead-free the recommended reflow condition