

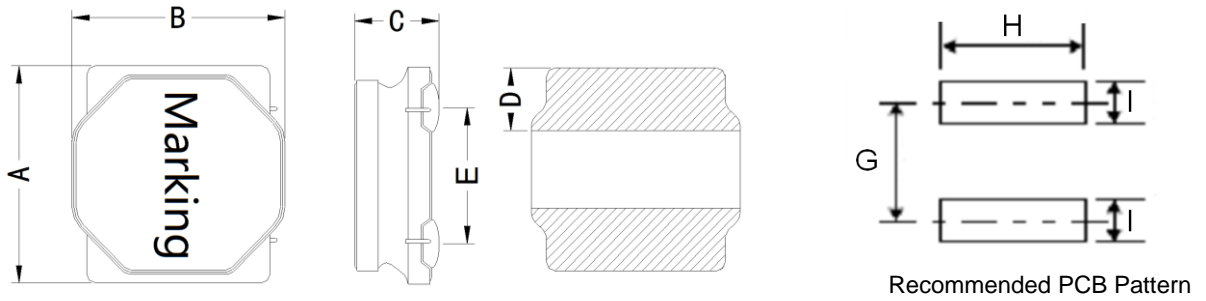
1. Part No. Expression

**S P S 4 0 1 8 B M 3 R 3 M F**

(a) (b) (c) (d) (e) (f)

- (a) Series Code
- (b) Dimension Code
- (c) Material Code
- (d) Inductance Code
- (e) Tolerance Code
- (f) RoHS Compliance

2. Configuration & Dimensions

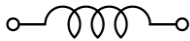


Note: Marking: Inductance code.

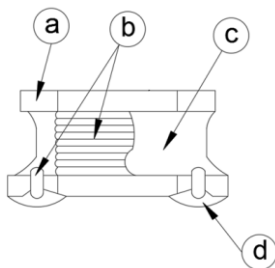
Unit: mm

A	B	C	D	E	G	H	I
4.0±0.2	4.0±0.2	1.8 Max.	1.1±0.2	2.5±0.2	2.8 Ref.	3.7 Ref.	1.2 Ref.

3. Schematic

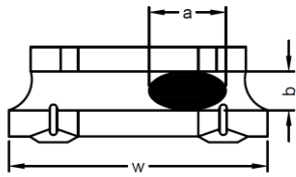


4. Material List



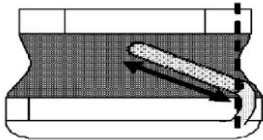
- a) Core
- b) Wire
- c) Glue
- d) Terminal

Void appearance tolerance limit & size of voids occurring to coating resin is specified below.



Appearance of exposed wire tolerance limit:

1. Width direction (dimension a) : Acceptable when  $a \leq w/2$ ;  
Nonconforming when  $a > w/2$
2. Length direction (dimension b): Dimension b is not specified
3. The total area of exposed wire occurring to each sides is not greater than 50% of coating resin area and is acceptable



External appearance criterion for exposed wire.

Exposed end of the winding wire at the secondary side should be 2mm and below.

## 5. General Specification

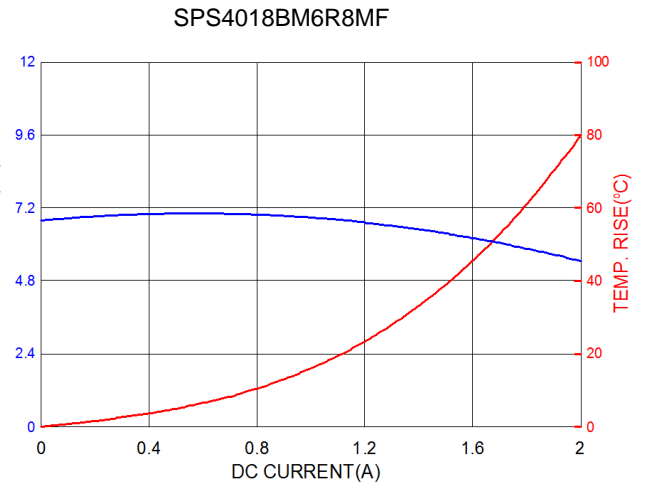
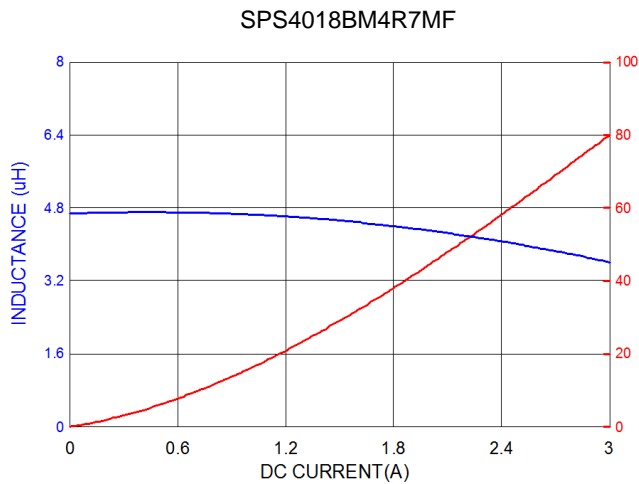
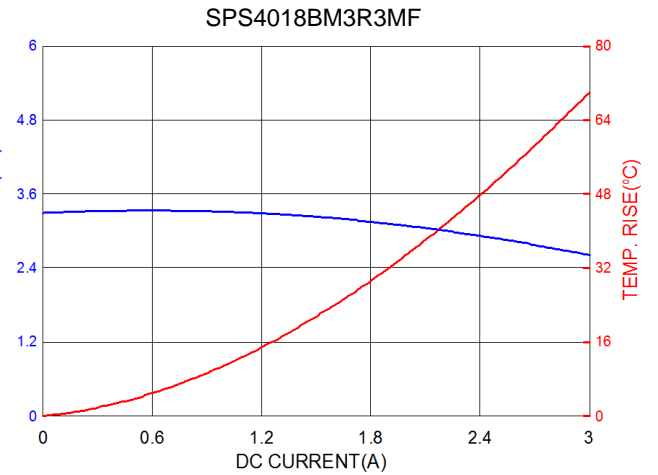
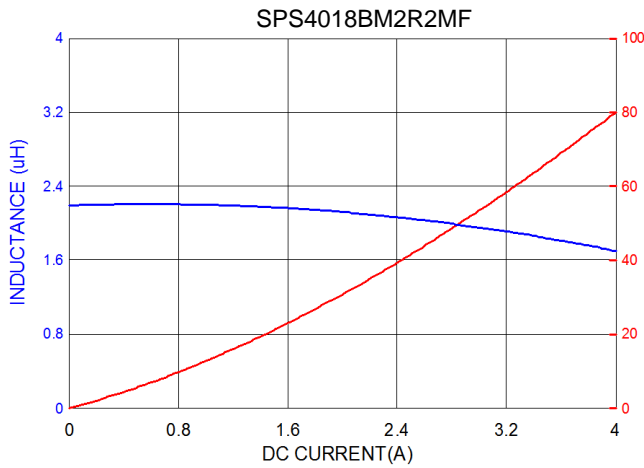
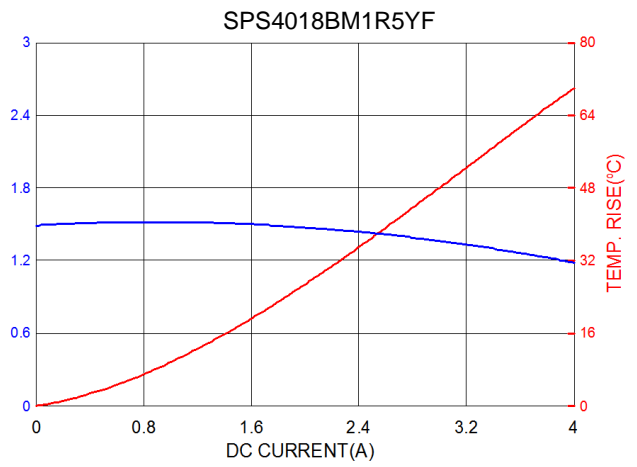
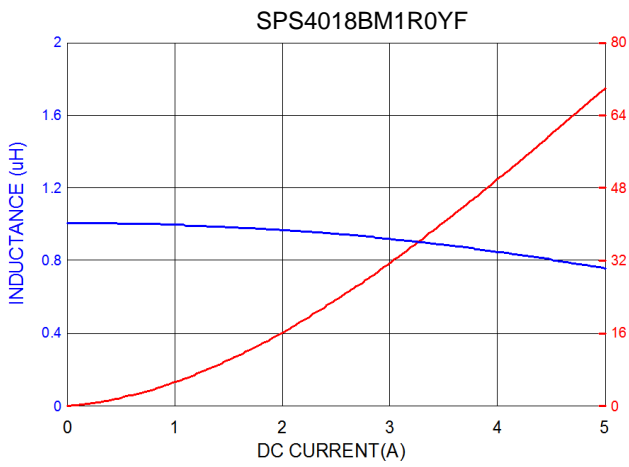
- a) Operating Temp. : -40°C to +125°C (Including self - temperature rise).
- b) Storage Temp. : -40°C to +125°C (on board).
- c) Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C.
- d) Saturation Current (Isat) will cause L0 to drop approximately 30%.
- e) Storage Condition (component in its packaging)
  - i) Temperature: Less than 40°C
  - ii) Humidity: 60% RH

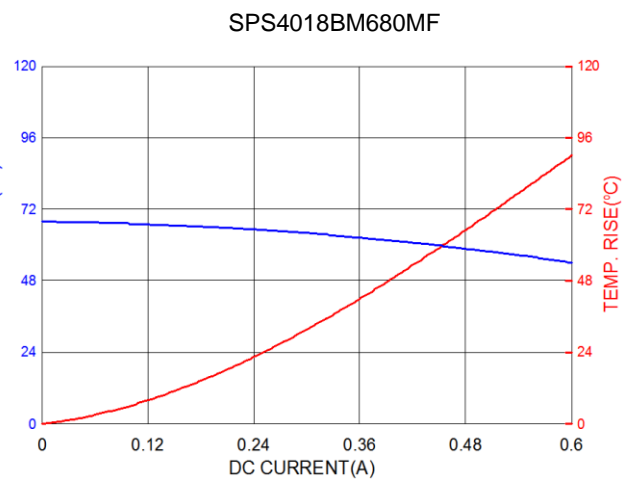
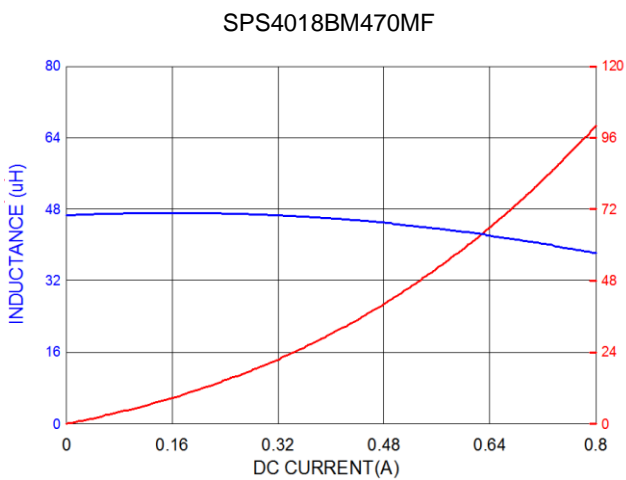
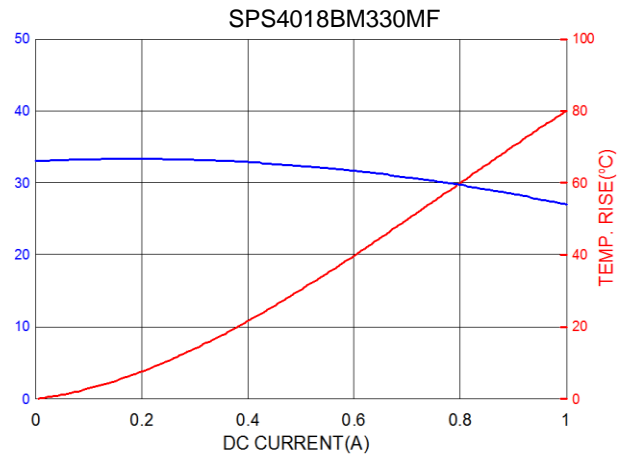
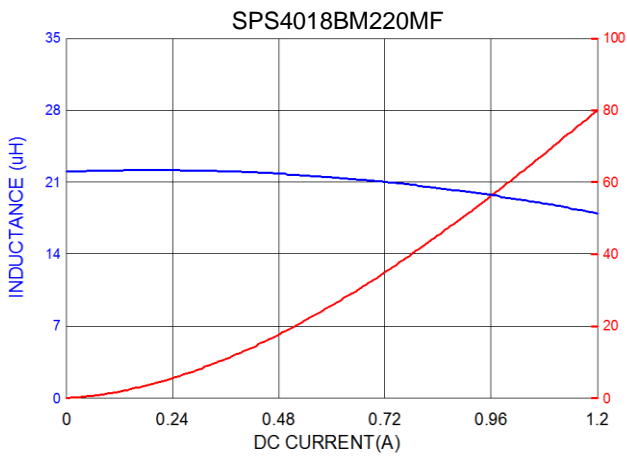
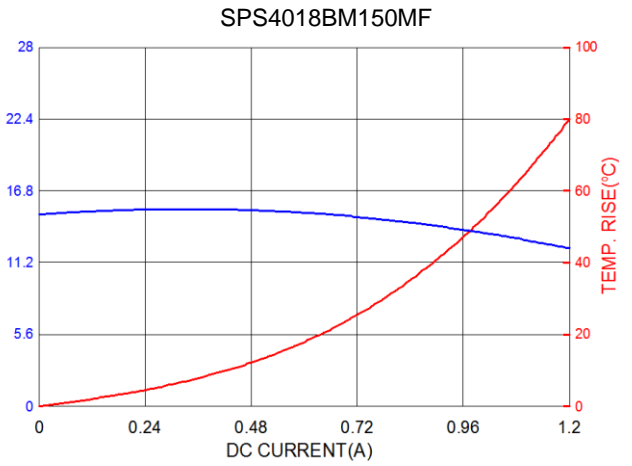
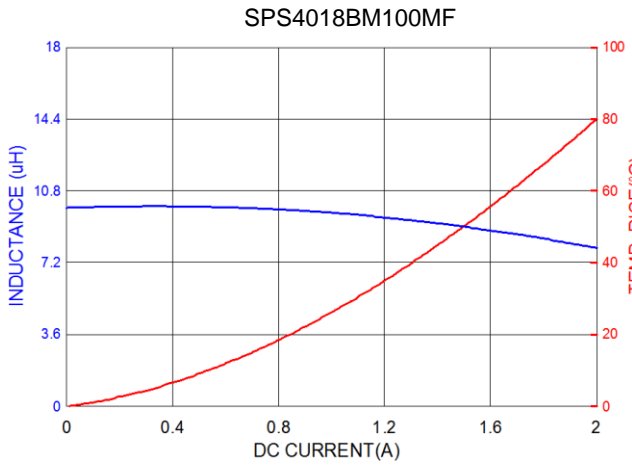
## 6. Electrical Characteristics

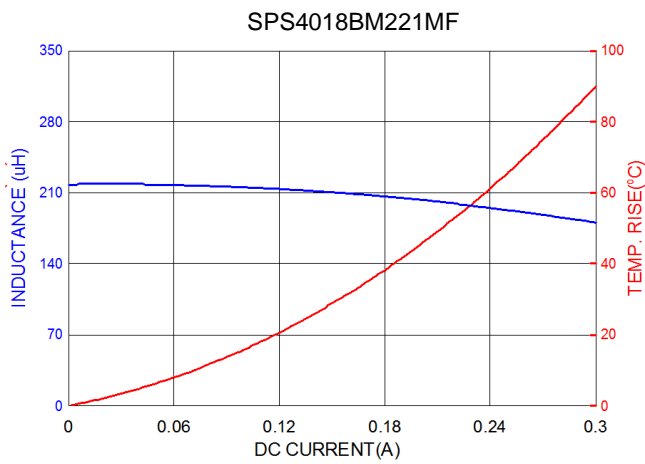
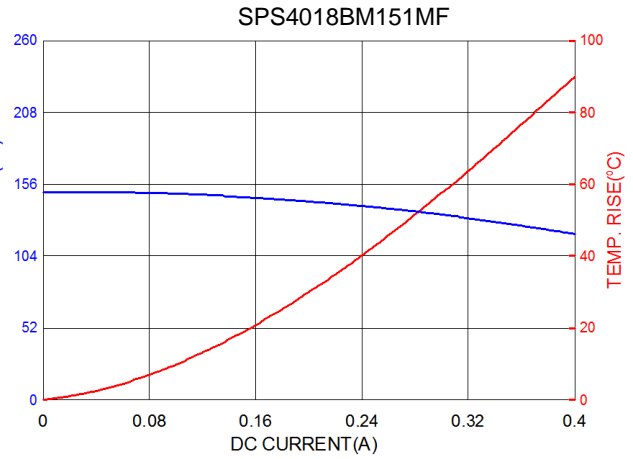
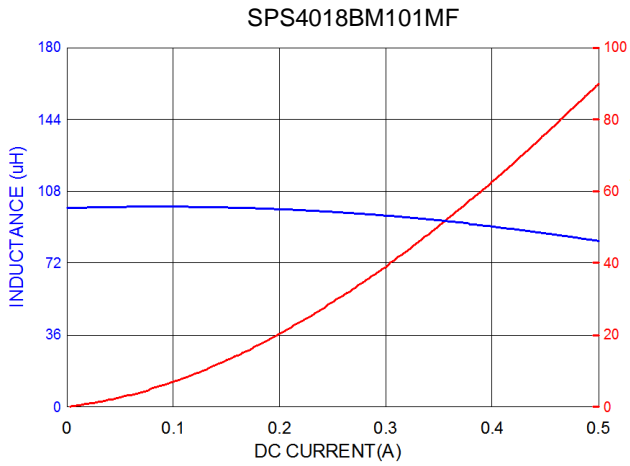
Part No.	Inductance ( $\mu$ H)	Test Frequency (Hz)	DCR ( $\Omega$ ) $\pm 20\%$	I rms (A)	I sat (A)	SRF (MHz) Min.
SPS4018BM1R0YF	1.00	1V/100K	0.027	3.20	4.00	90.0
SPS4018BM1R5YF	1.50	1V/100K	0.037	2.40	3.30	75.0
SPS4018BM2R2MF	2.20	1V/100K	0.042	2.20	3.00	60.0
SPS4018BM3R3MF	3.30	1V/100K	0.055	2.00	2.30	45.0
SPS4018BM4R7MF	4.70	1V/100K	0.070	1.70	2.00	35.0
SPS4018BM6R8MF	6.80	1V/100K	0.098	1.45	1.60	30.0
SPS4018BM100MF	10.0	1V/100K	0.150	1.20	1.30	25.0
SPS4018BM150MF	15.0	1V/100K	0.210	0.850	1.10	18.0
SPS4018BM220MF	22.0	1V/100K	0.290	0.720	0.900	15.0
SPS4018BM330MF	33.0	1V/100K	0.460	0.550	0.700	12.0
SPS4018BM470MF	47.0	1V/100K	0.650	0.440	0.600	10.0
SPS4018BM680MF	68.0	1V/100K	1.00	0.320	0.520	8.30
SPS4018BM101MF	100	1V/100K	1.45	0.280	0.420	6.50
SPS4018BM151MF	150	1V/100K	2.30	0.220	0.340	5.50
SPS4018BM221MF	220	1V/100K	3.80	0.170	0.275	4.00

Note: Tolerance Y=  $\pm 30\%$ , M=  $\pm 20\%$

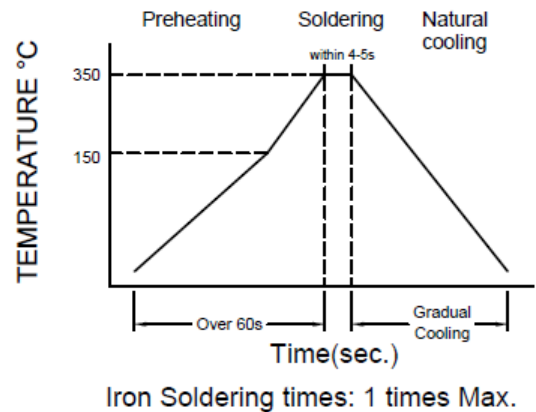
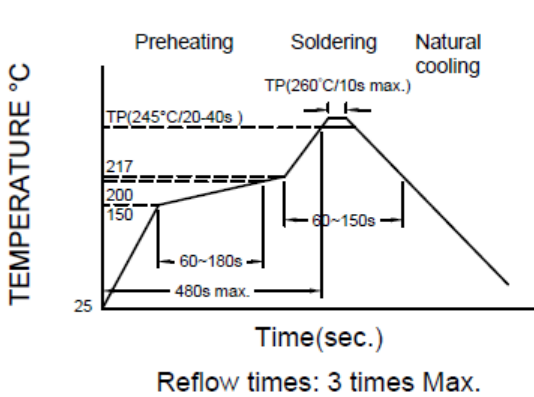
7. Characteristic Curve





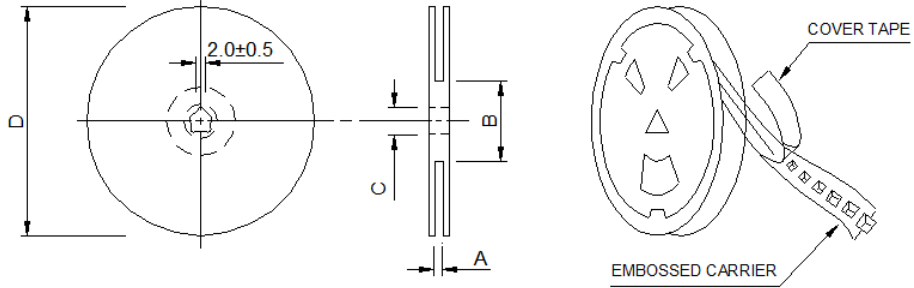


### 8. Soldering



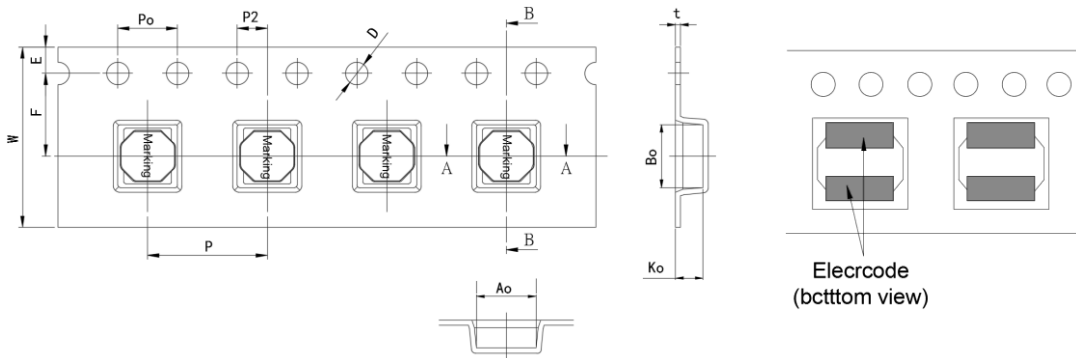
9. Packaging Information

9-1. Reel Dimension



Type	A (mm)	B (mm)	C (mm)	D (mm)
13"x12mm	13.4 +2/-0	80.0±2.0	13.0 +0.5/-0.2	330±3.0

9-2. Tape Dimension

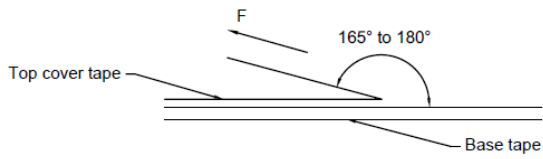


Series	Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	W(mm)	t(mm)
	4.40±0.1	4.40±0.1	2.00±0.1	8.00±0.1	12.00±0.3	0.35±0.1
SPS4018BM	E(mm)	F(mm)	D(mm)	Po(mm)	P2(mm)	
	1.75±0.1	5.50±0.1	1.50±0.1	4.00±0.1	2.00±0.1	

9-3. Packaging Quantity

Size	SPS4018BM
Chip/ Reel	3500

9-4 Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

**Application Notice:**

1. Storage Conditions:

To maintain the solderability of terminal electrodes:

- a) Recommended products should be used within 12 months from the time of delivery.
- b) The packaging material should be kept where no chlorine or sulfur exists in the air.

2. Transportation:

- a) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- b) Vacuum pick up is strongly recommended for individual components.
- c) Bulk handling should ensure that abrasion and mechanical shock are minimized.