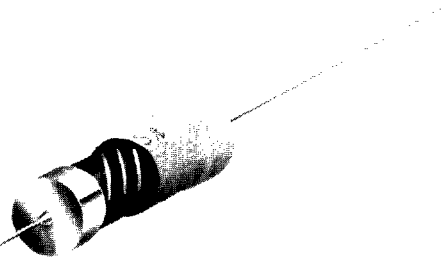


FLAMEPROOF POWER OXIDE RESISTORS

FA80 SERIES*

- Flameproof protection
- Range of 8 sizes: 0.5 watt to 7 watt at 70°C

* Manufactured in the U.K.



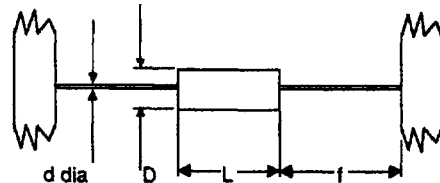
ELECTRICAL DATA:

COMMERCIAL		FA8270	FA8370	FA84	FA85	FA86	FA87	FA88	
Power rating at 70°C	watts	0.5	1.0	2.0	3.0	3.0	5.0	6.0	7.0
Resistance range*	ohms	16 - 50K	18 - 120K	16 - 270K	22 - 60K	22 - 65K	22 - 65K	43 - 70K	51 - 80K
Limiting element voltage	volts	250	350	350	450	450	500	650	650
TCR	ppm/°C	400			500				
Resistance tolerance	%	5, 10							
Values		EIA 2% values preferred							
Thermal impedance	°C/watt	140	110	90	60	55	50	35	30
Operating temp. range	°C	-55 to 235							

* Lower resistance values are available on request in wirewound version.

PHYSICAL DATA:

DIMENSIONS (mm) & WEIGHT (G)							
Type	L max	D max	l min	d nom	PCB mounting center	Min. Bend Radius	Wt. nom
FA8270	.244 (6.2)	.091 (2.3)	.827 (21.0)	.024 (0.6)	.401 (10.2)	.024 (0.6)	0.3
FA8370	.354 (9.0)	.131 (3.4)	.771 (19.6)	.031 (0.8)	.500 (12.7)	.047 (1.2)	0.5
FA84	.570 (14.5)	.201 (5.1)	.929 (23.6)	.031 (0.8)	.799 (20.3)	.047 (1.2)	1.1
FA85	.866 (22)	.362 (9.2)	1.145 (29.1)	.031 (0.8)	1.118 (28.4)	.047 (1.2)	3.7
FA86	1.260 (32)	.362 (9.2)	.849 (24.1)	.031 (0.8)	1.512 (38.4)	.047 (1.2)	5.2
FA87*	1.654 (42)	.362 (9.2)	—	.031 (0.8)	1.906 (48.4)	.047 (1.2)	6.6
FA88*	2.047 (52)	.362 (9.2)	—	.031 (0.8)	2.299 (58.4)	.047 (1.2)	8.0
FA89	.984 (25)	.362 (9.2)	1.086 (27.6)	.031 (0.8)	1.236 (31.4)	.047 (1.2)	4.0



* Length: FA87's and FA88's are not supplied on tape. Minimum lead length is 30mm.

CONSTRUCTION

The resistance element is deposited on a high purity ceramic rod. End caps are force fitted and termination wires welded to the caps. The element is adjusted to the required resistance value by a helical cut; finally the cement protection is applied to the resistor body before marking with indelible ink.

TERMINATIONS

Solder-coated copper wire.

MARKING: FA82,83 and 84 resistors are color coded with 4 bands. For larger sizes type reference, resistance value and tolerance are legend marked.

SOLVENT RESISTANCE: The body protection and marking are resistant to all normal industrial cleaning solvents suitable for printed circuits.

FLAMMABILITY: The resistors will not burn or emit incandescent particles under any condition of applied temperature or power overload.

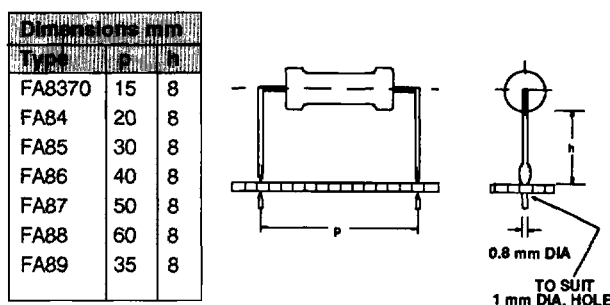
PERFORMANCE DATA:

		MAXIMUM
Load: at rated power: 1000 hours at 70°C	ΔR%	3
Shelf life: 12 months at room temperature	ΔR%	2
Derating from rated power at 70°C		Zero at 235
Climatic	ΔR%	1
Climatic category		40/125/56
Temperature rapid change	ΔR%	0.5
Resistance to solder heat	ΔR%	0.5

APPLICATION NOTES

1. If the resistors are to dissipate full rated power, it is recommended that the terminations should not be soldered closer than 4 mm from the body.
2. Due to operating temperature limitations imposed by some pcb materials, derating may be necessary. An estimate of the temperature rise to be expected can be calculated using the thermal impedance figures given under Electrical Data.
3. FA80 series resistors can also be supplied pre-formed. See Figure 1

Figure 1.



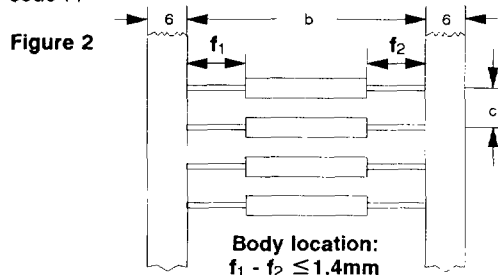
PACKAGING:

All resistors (except FA87,88) are normally supplied tape packed ready for loading onto automatic sequencing and insertion machines.

The standard taping method and critical dimensions are shown in Figure 2.

Component wires will not protrude beyond the outside edge of the tapes.

All taped resistors will be supplied either on reels or in ammpacks, depending upon ordered quantities. Preformed resistors are supplied loose packed in plastic bags or boxes. This product and packaging is denoted code F.



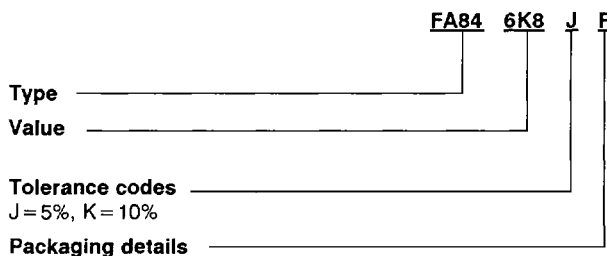
Type	b	c
FA8270/8370	2.047 (52)	.197 (5)
FA84	2.638 (67)	.394 (10)
FA85, 86, 89	3.346 (85)	.394 (10)

STANDARD QUANTITIES PER PACKAGE

Type	Code	FA8370	FA8270	FA84	FA85	FA86	FA87	FA88	FA89
Reel	R	5000	5000	1500	800	800	—	—	800
Lg Ammo Pack	A	4000	2000	1000	—	—	—	—	—
Sm Ammo Pk	A	2000	1000	—	—	—	—	—	—
Box	B	—	—	300	250	300	250	200	300

ORDERING PROCEDURE

Specify type, reference etc. as indicated in this example of FA84 6.8K ohms 5% resistors, taped and reeled.



DISCRETE