

ZEMREX[®] CM20 DRY REPLACEMENT FOR SILICONE GREASE 0.07°C/W

522 661 → 522 685

CM20 is a dry alternative to thermal grease. Its composition is 99% carbon and by nature it offers both thermal and electrical conductivity. If you are using thermal grease as an interface between heatsink and heat source then CM20 will offer a number of important advantages.

EXCELLENT THERMAL CONDUCTIVITY

The thermal resistance of CM20 approaches that of silicone grease. Because CM20 is dry and offers compression there is no shrinkage or drying out to affect long term performance. CM20 conforms to irregular mating surfaces allowing heat to be transferred evenly.

HIGH ELECTRICAL CONDUCTIVITY

Because of its carbon structure and conformity to uneven surfaces CM20 provides a very low resistance path between semiconductor and heatsink. There is no problem of varying resistance as with improper amounts of grease and its consistent quality assures a superior connection each time.

CONTAMINATION ELIMINATED

CM20 produces no outgassing and remains clean throughout the assembly process. It contains no silicones or oil as with grease and therefore, does not attract dust or foreign particles. It is unaffected by the solvent cleaning operation which can remove grease nor does it contaminate solder baths. CM20 is non-toxic and non-flammable and being inorganic, will not support microbiological growth.

ECONOMY AND SPEED

CM20 pads are cut to shape and dry to handle. They are quick to apply and can increase production output over the tedious grease method of assembly.

ADHESIVE COATINGS

CM20 pads are available with one side adhesive coating as an assembly aid. However, the adhesive will double the thermal resistance and electrical conductivity will be reduced. The adhesive (rubber solvent) is an assembly aid and has a shelf life of 6 months when stored at +10 to +18°C.

STANDARD OUTLINES

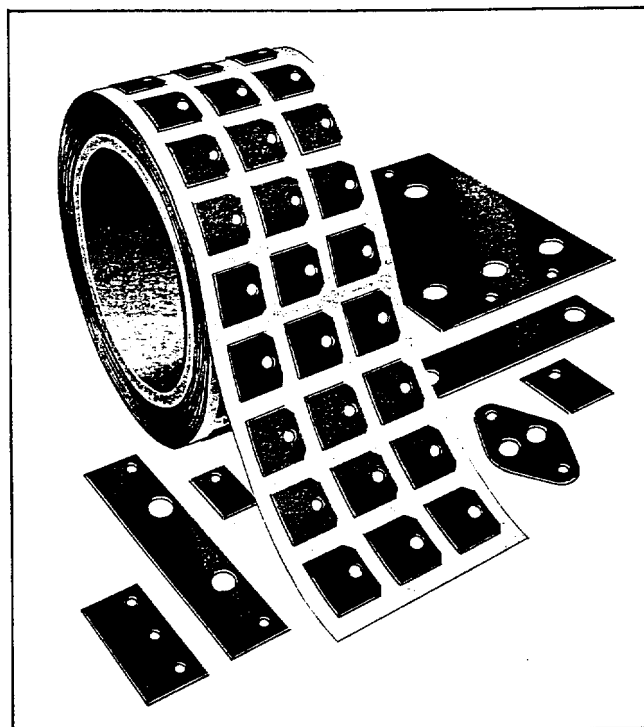
CM20 can be cut to other shapes listed on the following pages in addition to the dedicated TO-3 outline shown on this page. As CM20 is an electrical conductor care should be taken when specifying outlines as the transistor pins could short against the pad.

CUSTOM SHAPES AND SHEETS

CM20 can be cut to customer specification and drawing with low tooling costs and short lead times. Although available in sheets, we would recommend that volume runs are produced on our specialised cutters.

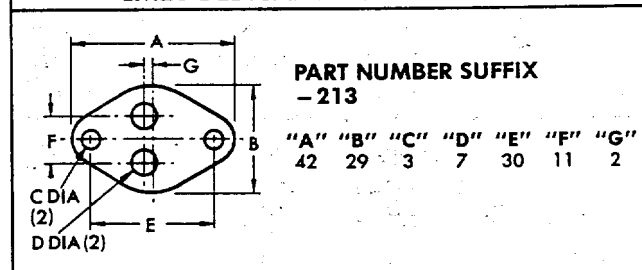
RECOMMENDED MOUNTING PRESSURE

5 - 15kg/cm² Depending on surface flatness



TYPICAL PROPERTIES OF CM20		TEST STANDARD
THICKNESS mm	0.20±0.025	
VOLUME RESISTIVITY OHMS-CM	6.2×10^{-5}	ASTM D991 MODIFIED
APPROXIMATE THERMAL RESISTANCE (TO-3) °C/WATT	0.07	WARTH
THERMAL CONDUCTIVITY	$Wm^{-1}K^{-1}$ 3.85	
HARDNESS	84±4	SHORE MICRO
TEAR RESISTANCE N/mm	9.5	ASTM D624
TENSILE STRENGTH MPa	3.85	ASTM D412
ELONGATION PERCENT	1	ASTM D412
TEMPERATURE RANGE °C	-200 to +500	
COLOUR		DARK METALLIC

CM20 DEDICATED TO-3 OUTLINE



ORDERING PROCEDURE:

CM20-AC-XXX
CM20-NA-XXX

NA = NON ADHESIVE
AC = ADHESIVE COAT
XXX = PART No. SUFFIX

(SEE PAD OUTLINES PAGES)

NOTE For thicker CM20 grades see CR50.