



6A 81C 00043 D T-01-17
SILICON DIFFUSED JUNCTION RECTIFIERS
50-1350V
TRANSIENT REVERSE VOLTAGE

DD4020/6
 DD4066-8

The DD4020/6 and DD4066-8 rectifiers are silicon diffused junction, stud mounted devices complying with BS SO-10 and IEC A3U outlines.

They are designed for use in general purpose medium current applications where transient voltages up to 1350V are encountered.

The devices are manufactured with either polarity stud, the reverse polarity version being denoted by a suffix A to the type number.

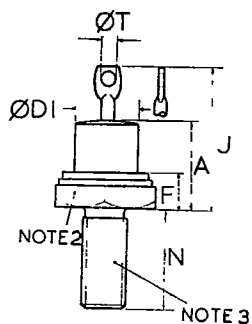
QUICK REFERENCE DATA

VRRMmax.
 I_{F(AV)}max. at T_{stud} = 100°C
 I_Rmax. at V_Rmax. and T_J = 25°C
 V_Fmax. at I_F = 6A and T_J = 25°C

	DD4020	DD4026	DD4066	DD4067	DD4068
VRRMmax.	50V	400V	400V	600V	800V
I _{F(AV)} max.			6A		
I _R max.			5 μA		
V _F max.			1V		

MECHANICAL DETAILS

Ref.	DIMENSIONS				Notes
	Millimetres		Inches		
	Min.	Max.	Min.	Max.	
A		10.28		0.405	
ØD1		10.76		0.424	
F	2.0	4.4	0.075	0.175	2
J		20.32		0.800	
N	10.72	11.50	0.422	0.453	
ØT	1.53		0.060		



Notes:

- The rectifiers comply with BS SO-10 and IEC A3U outlines.
- This zone includes a hexagon $\frac{7}{8}$ in (11.11 mm) across flats.
- Thread 10-32 UNF-2A.
- The millimetre dimensions are derived from the inch dimensions.

Weight 5.5 grammes
 Weight with nut and washer 7.0 grammes

In the interest of improved product design, changes to this specification may be made at any time.

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RATINGS 81C 00044 D

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The ratings quoted are limiting values of operating and environmental conditions and are in accordance with the absolute maximum rating system defined in BS 3494 (Part 1) and IEC Publication 134. They apply for the frequency range 50 Hz to 400 Hz. Simultaneous application of all ratings is implied unless otherwise stated.

Voltage Ratings

		DD4020	DD4026	DD4066	DD4067	DD4068
VRWM	Crest working reverse voltage	50V	400V	400V	600V	800V
VRRM	Repetitive peak reverse voltage	50V	400V	400V	600V	800V
VRSM	Non-repetitive peak reverse voltage (10 ms max.)	50V	400V	800V	1200V	1350V
VR	Continuous d.c. reverse voltage	50V	400V	400V	400V	400V

Current Ratings

IF(AV)	Mean forward current at $T_{\text{stud}} = 100^{\circ}\text{C}$	6A
IFRM	Repetitive peak forward current	25A

Thermal Ratings

Tamb	Operating ambient temperature range	-55°C to $+100^{\circ}\text{C}$
Tstg	Storage temperature range	-55°C to $+100^{\circ}\text{C}$
TJ	Maximum junction temperature	125°C

CHARACTERISTICS**Electrical Characteristics**

		Min.	Typ.	Max.
VAB	Avalanche voltage at $T_J = 25^{\circ}\text{C}$			
		80V		
		500V		
		980V		
		1350V		
IR	Reverse current at $V_{R\text{max}}$ $T_J = 25^{\circ}\text{C}$ $T_J = 100^{\circ}\text{C}$	1500V		
			0.65 μA	5 μA
			65 μA	600 μA
VF	D.C. forward voltage at $I_F = 6\text{A}$ and $T_J = 25^{\circ}\text{C}$		0.97V	1V

Thermal Characteristics

Rth(j-stud)	Thermal resistance (junction-to-stud)	2 deg C/W
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INSTALLATION NOTES

Maximum diameter of clearance hole in heat sink 0.206 in (5.3 mm)
To ensure good thermal contact between the rectifier and the heat sink:

- Remove all burrs from the edge of the heat sink clearance hole.
- Use a small amount of silicone grease between the rectifier and heat sink.
- Apply the correct torque to the nut on assembly.

Maximum torque 12 lbf in (1.34 Nm)
Minimum torque for good thermal contact 8 lbf in (0.90 Nm)

The rectifier is not recommended for operation without a heat sink.

Rectifier polarity. Stud polarity is denoted by a conventional rectifier symbol on the rectifier case. Stud polarity is also indicated by the rectifier type number: anode stud rectifiers have a suffix A to their type numbers while cathode stud types do not have a suffix letter.

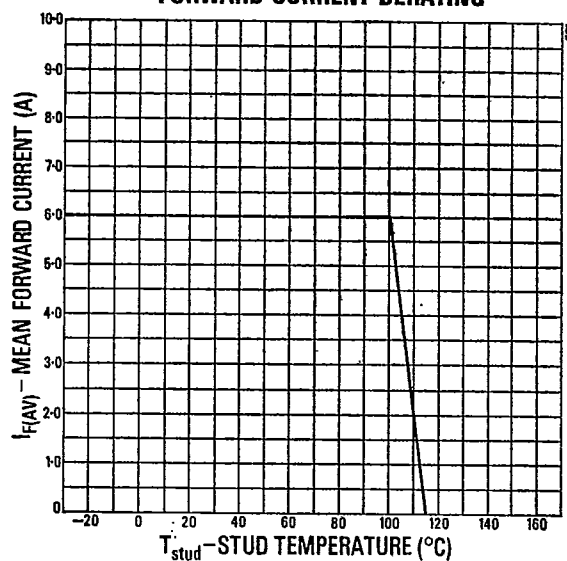
For applications which require the rectifier case to be electrically insulated from the heat sink, use insulating kit number 54006108.

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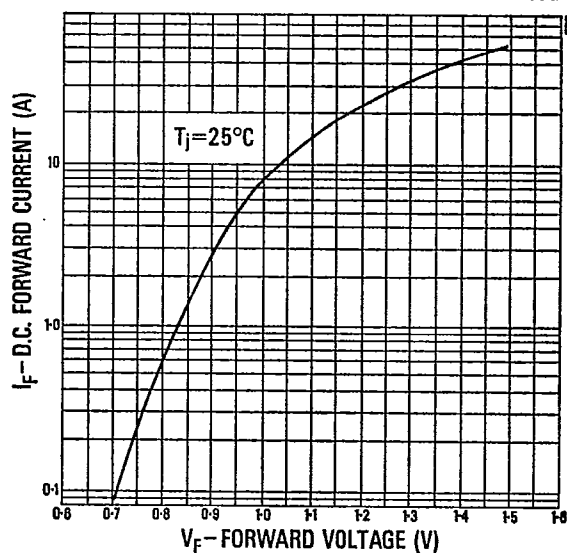
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FORWARD CURRENT DERATING



TYPICAL ISOTHERMAL FORWARD CHARACTERISTIC



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