



ENGINEERING DATA - DIODE GENERAL DESCRIPTION FOR "BUTTON TYPE" DIODES

The Renard "button" diode is a silicon rectifier with a diffused junction in a compact, molded case. Designed for use in alternators.

INSTALLATION PROCEDURES:

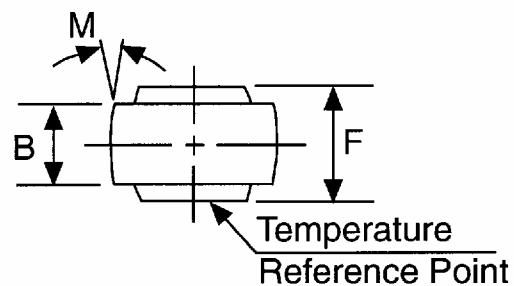
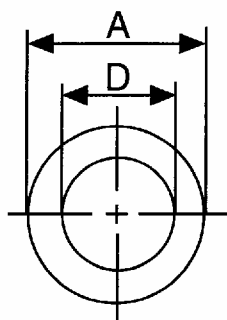
MOUNTING PROCEDURE - "BUTTON TYPE DIODE"

This unit is designed for soldering to a heat sink with the following notes of caution:

1. The diode's metal contacts should not be subjected to more than 250°C maximum for a period not to exceed three minutes.
2. Use only rosin flux solder for attaching heat sink or leads to diode.
3. Steel or aluminum heat sinks must have a plated/solderable surface.

DIMENSIONS

SYM.	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	0.333	0.405	8.46	10.29
B	0.165	0.175	4.19	4.45
D	0.218	0.272	5.54	6.91
F	0.234	0.246	5.94	6.25
M	5°NOM		5°NOM	





ELECTRICAL RATINGS OF STANDARD, MICRO & JUMBO BUTTON DIODE

MAXIMUM RATINGS CHARACTERISTICS

CHARACTERISTICS	SYMBOL	UNIT	
RENARD PART NUMBER		7601, 7610,7611 7612,7613	7620, 7626, 7627 7628, 7629
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	
Non Repetitive Peak Reverse Voltage (Halfwave, single phase 60 HZ peak)	V_{RSM}	120	
Average Rectified Forward Current (Single phase, resistive load 60 HZ T_C 150°C)	I_o	25	50
Non Repetitive Peak Surge Current (surge applied @ rated load conditions, half wave, single phase, 60 HZ)	I_{FSM}	400 (for 1 cycle)	
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +175	
Thermal Resistance, Junction to Case $R_{\theta JC}$ (Single Side Cooled)		1.0 Maximum	
Maximum Instantaneous Forward Voltage Drop I_F 80 Amp, T_C 25°C		1.18 Maximum	
Maximum Reverse Current (rated dc voltage) T_C 25°C T_C 100°C		100 500	Microamp

ELECTRICAL RATINGS OF THE AVALANCHE BUTTON DIODE #7640

CHARACTERISTIC SYMBOL MIN MAX UNIT

CHARACTERISTIC	SYMBOL	MIN	MAX	UNIT
RENARD PART NUMBER	7647, 7648, 7649			
Reverse Current ($V_R = 20$ Vdc, $T_C = 25^\circ\text{C}$) ($V_R = 20$ Vdc, $T_C = 100^\circ\text{C}$)	I_R	- -	50 500	μAdc
Breakdown Voltage (1) "Avalanche" ($I_R = 100$ mAdc, $T_C = 25^\circ\text{C}$)	$V_{(BR)}$	24	32	Volts
(1) Pulse Test: Pulse width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 2.0\%$				
Average Rectified Forward Current (Single phase, resistive load 60 HZ T_C 150°C)	I_o	50		Adc
Maximum Instantaneous Forward Voltage Drop I_F 80 Amp, T_C 25°C		1.3 Maximum		Vdc