(DO-21)

AUTO-DIODES

Medium-current silicon rectifiers - compact, highly efficient silicon rectifiers for medium-current applications.

MAXIMUM RATINGS

Rating	Symbol	1N3491	1N3492	1N3493	1N3494	1N3495	MR327	MR238	MR330	MR331	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RM}(rep) V_{RM}(wkg) V_R	50	100	200	300	400	500	600	800	1000	Volts
Non-Repetitive Peak Reverse Voltage (halfwave, single phase, 60 cycle peak)	V_{RM}(non-rep)	100	200	300	400	500	600	720	1000	1200	Volts
RMS Reverse Voltage	V_r	35	70	140	210	280	350	420	580	700	Volts
Average Rectified Forward Current (single phase, resistive load, 60 Hz , see Figure 3) TC = 130°C	I_0	25									Amp
Non-Repetitive Peak Surge Current (surge applied at rated load conditions, see Figure 5)	I_{FM}(surge)	300 (for 1/2 cycle)									Amp
I^2t Rating (non-repetltlve, for t greater than 1 ms and less than 8.3 ms)	I^2t	375									$A(rms)^{2\ sec}$
Operating and Storage Junction Temperature Range	Tj, Tstg	-65 to + 175									C°

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	°JC	1.2	°C/Watt

ELECTRICAL CHARACTERISTICS

Characteristic and Conditions	Symbol	Max	Unit
Full Cycle Average Forward Voltage Drop (rated IO and V_r, Single phase, 60 Hz, TC = 150°C)	$V_F(AV)$	0.6	Volts
Instantaneous Forward Voltage Drop (I_F = 100 Amps, Tj = 25°C)	V_F	1.5	Volts
Full Cycle Average Reverse Current (rated IO and V_r, single phase, 60 Hz, TC = 150°C)	$I_R(AV)$		mA
1N3491		10	
1N3492		10	
1N3493		8	
1N3494		6	
1N3495		4	
MR327		3	
MR328		2.5	
MR330		2	
MR331		1.5	
DC Reverse Current (Rated V_R, T_C = 25°C)	I_R	1.0	mA

FIGURE 1 — MAXIMUM FORWARD VOLTAGE DROP

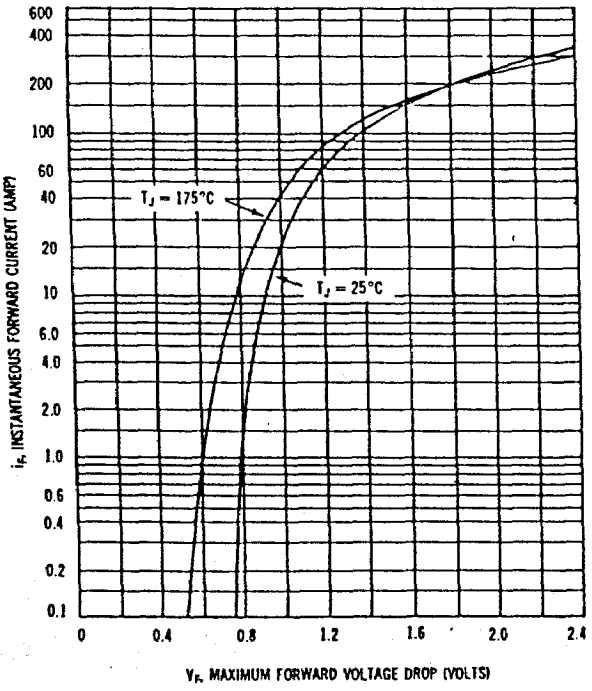

FIGURE 2 — MAXIMUM FORWARD POWER DISSIPATION