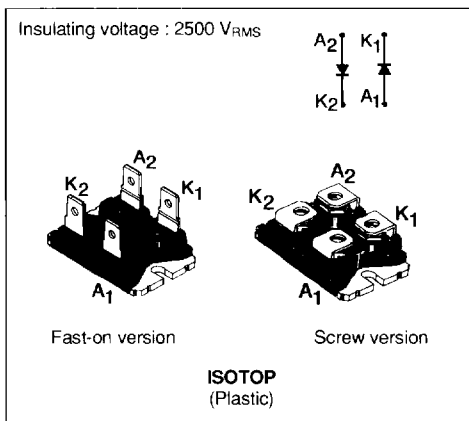


FAST RECOVERY RECTIFIER DIODE

- VERY HIGH REVERSE VOLTAGE CAPABILITY
- VERY LOW REVERSE RECOVERY TIME
- VERY LOW SWITCHING LOSSES
- LOW NOISE TURN-OFF SWITCHING
- INSULATED : Capacitance 45pF


DESCRIPTION

Double rectifiers suited for switching mode power supply.

ABSOLUTE RATINGS

Symbol	Parameter		Value	Unit
V _{RRM}	Repetitive Peak Reverse Voltage		1200	V
V _{RSM}	Non Repetitive Peak Reverse Voltage		1200	V
I _{FRM}	Repetitive Peak Forward Current	t _p ≤ 10μs	375	A
I _{F(RMS)}	RMS Forward Current per leg		70	A
I _{F(AV)}	Average Forward Current	T _{case} = 55°C δ = 0.5 per leg	30	A
I _{FSM}	Surge Non Repetitive Forward Current	t _p = 10ms Sinusoidal	200	A
P	Power Dissipation	T _{case} = 55°C per leg	60	W
T _{stg} T _j	Storage and Junction Temperature Range		- 40 to + 150	°C

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R _{th(j-c)}	Junction-case	per leg total	1.5 0.8	°C/W
R _{th(c)}	Coupling		0.1	°C/W

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I _R	T _J = 25°C	V _R = V _{RRM}			100	μA
	T _J = 100°C				5	mA
V _F	T _J = 25°C	I _F = 30A			1.9	V
	T _J = 100°C				1.8	

RECOVERY CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t _{rr}	T _J = 25°C	I _F = 1A	di _F /dt = - 15A/μs	V _R = 30V		165	ns
		I _F = 0.5A	I _R = 1A	I _{rr} =0.25A		70	

TURN-OFF SWITCHING CHARACTERISTICS (Without Series Inductance)

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
t _{IRM}	di _F /dt = - 120A/μs	V _{CC} = 200V I _F = 30A L _p ≤ 0.05μH T _J = 100°C See figure 1			200	ns
	di _F /dt = - 240A/μs			120		
I _{RM}	di _F /dt = - 120A/μs				20	A
	di _F /dt = - 240A/μs			22		

TURN-OFF OVERVOLTAGE COEFFICIENT (With Series Inductance)

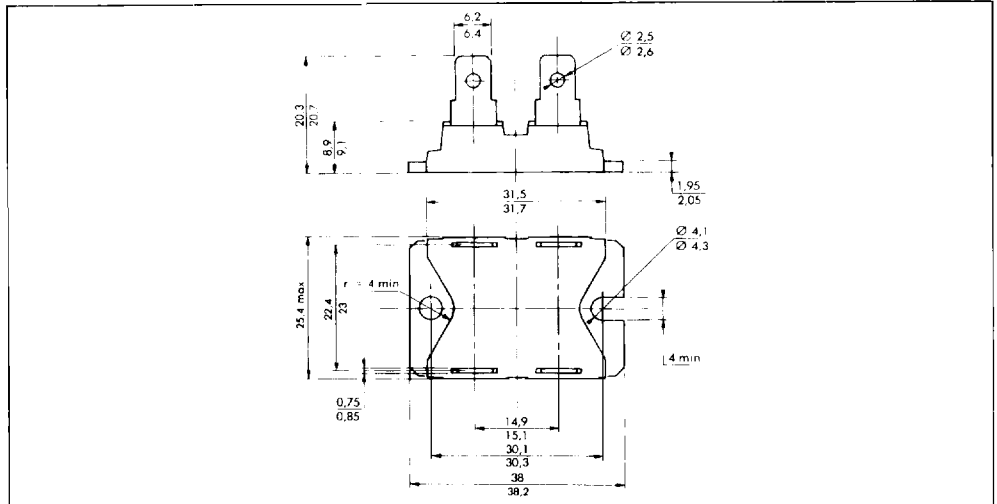
Symbol	Test Conditions		Min.	Typ.	Max.	Unit
C = $\frac{V_{RP}}{V_{CC}}$	T _J = 100°C di _F /dt = - 30A/μs	V _{CC} = 200V I _F = I _{F(AV)} L _p = 5μH See figure 2		3.3	4.5	

To evaluate the conduction losses use the following equations :

$$V_F = 1.47 + 0.010 I_F \quad P = 1.47 \times I_F(AV) + 0.010 I_F^2(RMS)$$

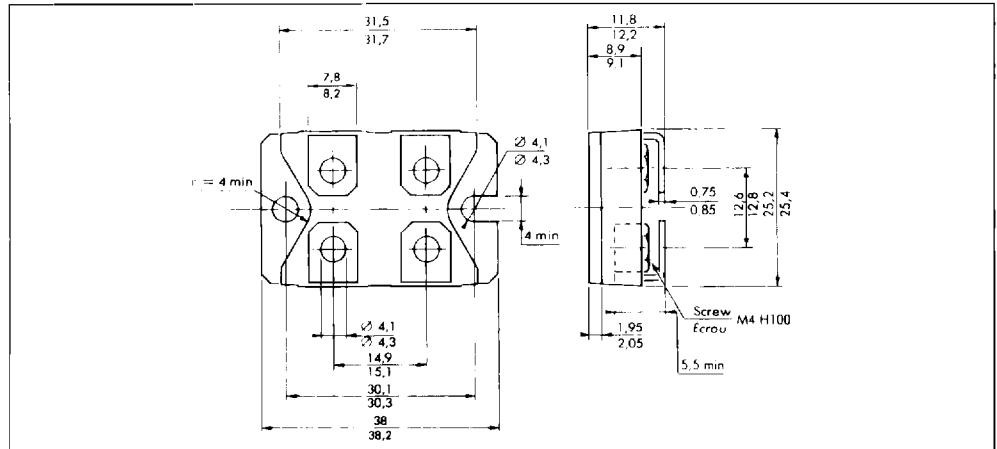
PACKAGE MECHANICAL DATA

ISOTOP Plastic : FAST-ON VERSION



Marking : type number

ISOTOP Plastic : SCREW VERSION



Marking : type number + Suffix V

Recommended screw torque value : 13 ± 2 kg.cm
 Maximum screw torque value : 15 kg.cm.

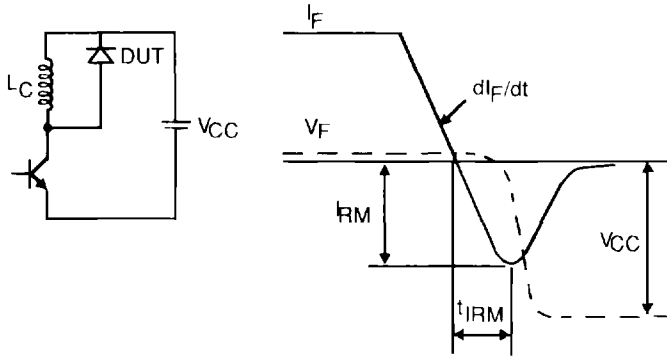


Figure 1 : Turn-off switching characteristics (without series inductance).

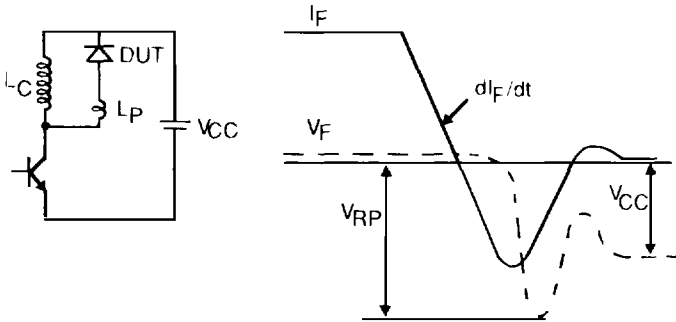


Figure 2 : Turn-off switching characteristics (with series inductance).