

CAPITÓLIO

MODULE TYPE

CSST330

VOLTAGE RATINGS MAXIMUM	LIMITS UNITS
V _{DRM} Repetitive peak off-state voltage, (note 1)	1600-2200 V
V _{DSM} Non-repetitive peak off-state voltage, (note 1)	1600-2200 V
V _{RPM} Repetitive peak reverse voltage, (note 1)	1600-2200 V
V _{RSM} Non-repetitive peak reverse voltage	1700-2300V

OTHER RATINGS MAXIMUM

LIMITS UNITS

I _{T(AV)M} Maximum average on-state current, T _{case} =89°C	320A
I _{T(AV)M} Maximum average on-state current. T _{case} =85°C,	320A
I _{T(AV)M} Maximum average on-state current. T _{case} =100°C,	376A
I _{T(RMS)M} Nominal RMS on-state current, T _{case} =55°C	520A
I _{T(d.c.)} D.C. on-state current, T _{case} =55°C	520A
I _{TSM} Peak non-repetitive surge tp=10ms, V _{rm} =0.6VRRM	9.2kA
I _{TSM2} Peak non-repetitive surge tp=10ms, V _{rm} ≤10V,	10.2kA
I _{zt} capacity for fusing tp=10ms, V _{rm} =0.6VRRM	423000 A ² s
I _{zt} capacity for fusing tp=10ms, V _{rm} ≤10V	423000 A ² s
(di/dt) _{cr} Critical rate of rise of on-state current (repetitive)	100A/μs
(di/dt) _{cr} Critical rate of rise of on-state current (non-repetitive)	500A/μs
V _{RGM} Peak reverse gate voltage	10V
P _{G(AV)} Mean forward gate power	20W
P _{GM} Peak forward gate power	120W
V _{isol} Isolation Voltage	4800/4000V
T _{j op} Operating temperature range	40 to +140 °C
T _{stg} Storage temperature range	40 to +125 °C

	PARAMETER	MIN.	TYP	MAX	TEST Conditions	Unit
V _{TM}	Maximum peak on-state voltage	-	-	1.32	I _{TM} =960A	V
V _{TM}	Maximum peak on-state voltage	-	-	1.32	I _{TM} =960A	V
V _{T0}	Threshold voltage	-	-	0.8		V
r _T	Slope resistance	-	-	0.68		mΩ
(dv/dt) _{cr}	Critical rate of rise of off-state voltage	1000	-	-	V _D =80% V _{DRM} , linear ramp, Gate o/c	V/μs
I _{DRM}	Peak off-state current	-	-	40	Rated V _{DRM}	mA
I _{RPM}	Peak reverse current	-	-	40	Rated V _{RPM}	mA
V _{GT}	Gate trigger voltage	-	-	2.0	T _j =25°C, V _D =10V, I _T =3A	V
I _{GT}	Gate trigger current	-	-	220	T _j =25°C, V _D =10V, I _T =3A	mA
I _H	Holding current	-	-	150	T _j =25°C	mA

t_{gd}	Gate controlled turn-on delay time	-	0.6	2	$I_{FG}=1A, t_r=0.5\mu s, V_D=67\%V_{DRM}, I_{TM}=300A, di/dt=1A/\mu s, T_j=25^\circ C$	μs
I_{rm}	Reverse recovery current	-	275	-	$I_{TM}=300A, t_p=200\mu s, di/dt=10A/\mu s, V_r=50V$	A
t_q	Turn-off time	-	300	-	$I_{TM}=300A, t_p=200\mu s, di/dt=10A/\mu s, V_r=50V, V_{dr}=80\%V_{DRM}, dV_{dr}/dt=20V/\mu s$	μs
R_{thJC}	Thermal resistance, junction to case	-	-	0.06	Whole Module	K/W
R_{thCK}	Thermal resistance, case to heatsink	-	-	0.08	Whole Module	K/W
F_1	Mounting force (to heatsink)	4.25	-	5.75		Nm
F_2	Mounting force (to terminals)	14.45	-	19.5 5		Nm
W_t	Weight	-	750	-		g

Voltage Grade	V_{DRM} V	V_{DSM} V	V_{RRM} V	V_{RSM} V	V_D DC V	V_R DC V
16	1600			1700	820	
18	1800			1900	1150	
22	2200			2300	1393	

Dimensions in mm (1 mm = 0.0394")

