

TSR8T600CTB

TSR8T600CTI

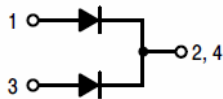
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600V Schottky diode

TO-263
TSR8T600CTB



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Features

- Insulated device with internal ceramic
- Low t_{RR} , Very low switching losses
- High voltage rectifier
- High dIF/dt capable (1000A/μs)

Applications

- Motor drive circuits
- DC-AC Inverters
- Power Factor Correction (PFC) Boost Diode

Maximum ratings and electrical characteristics (T_J = 25°C unless otherwise noted)

Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			VRRM	600		V
Maximum average forward rectified current	per diode		IF(AV)	8		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode			IFSM	80		A
Operating junction and storage temperature range			TJ, TSTG	-65 to +175		°C
Typical thermal resistance per leg	TO-263/262		RθJC	2		°C/W
Reverse recovery time.			trr (typ)	13		ns
Instantaneous forward voltage per diode			VF(1)	TYP.	MAX.	V
	IF=4A	TJ=25°C		2.00		
	IF=8A			2.20	2.50	
	IF=4A	TJ=125°C		1.32		
	IF=8A			1.50	1.70	
Instantaneous reverse current per diode at rated reverse voltage		TJ=25°C	IR(2)	1	50	uA
		TJ=125°C		30	300	uA

Notes:

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

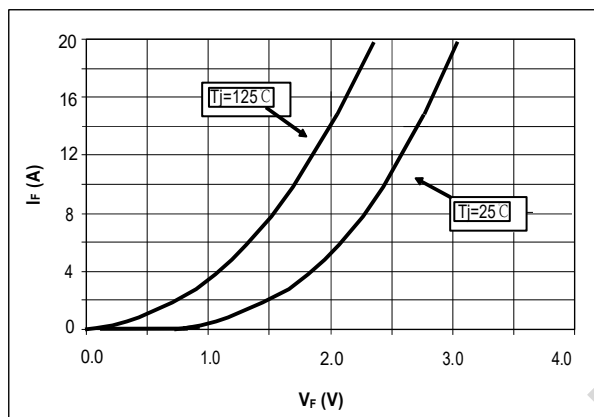


Figure 1. Typical I_F vs V_F

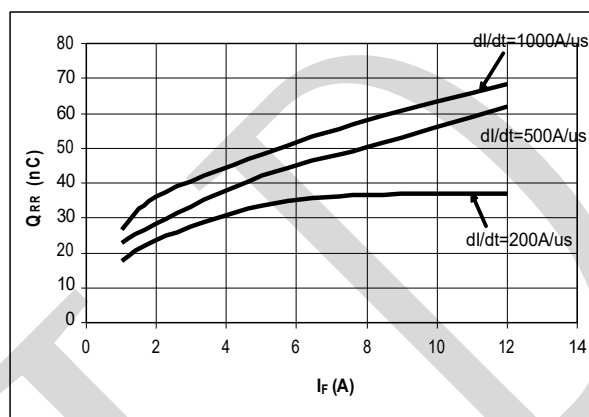


Figure 2. Typical Q_{RR} vs I_F at $T_J = 125\text{ °C}$

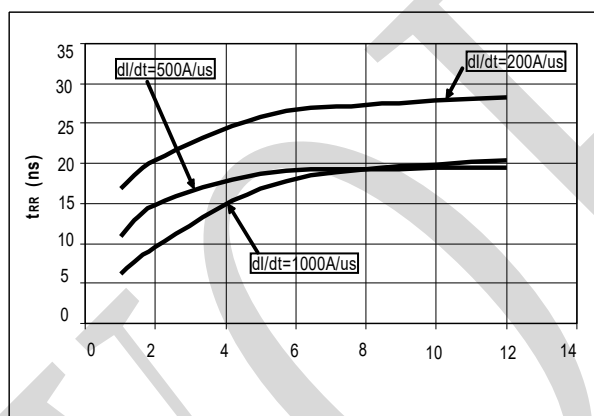


Figure 3. Typical t_{RR} vs I_F at $T_J = 125\text{ °C}$

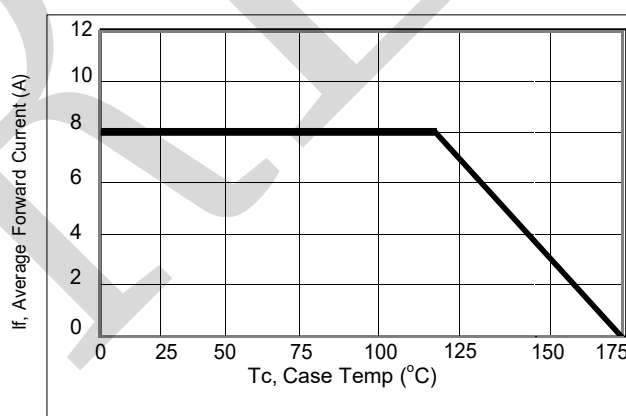


Figure 4. Current Derating, Case

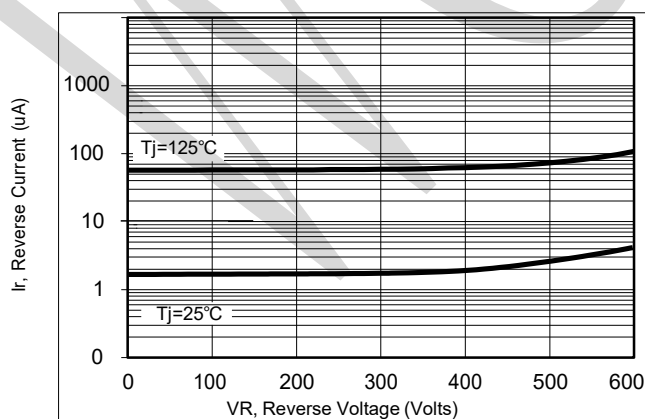


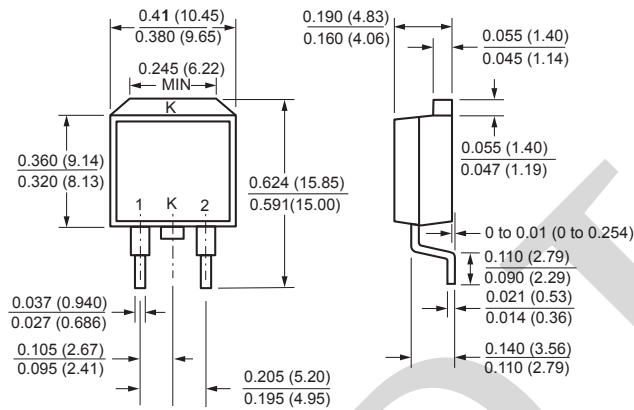
Figure 4. Typical Reverse Current

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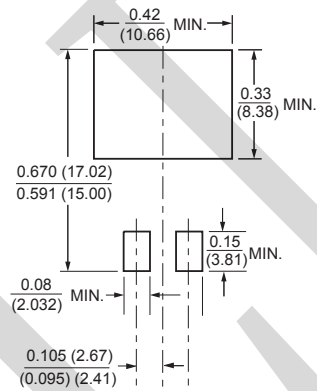
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Mounting Pad Layout



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