MURS620

Switchmode Ultra-Fast Power Rectifier

Reverse Voltage： 200Volts
Forward Current:6.0Amperes

Features

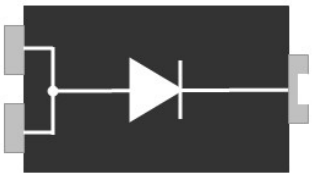
- ◇ Superfast recovery times-epitaxial construction
- ◇ Low forward voltage,High current capability
- ◇ Fast switching for high efficiency
- ◇ Excellent low reverse leakages
- ◇ Excellent high temperature stability
- ◇ Low stored charge majority carrier conduction
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.

TO-277

Applications

- ◇ DC to DC converter
- ◇ Switching mode converters and inverters
- ◇ Lighting application
- ◇ Freewheelilng application

PIN CONFIGURATION



Mechanical Data

- ◇ Moisture Sensitivity: MSL Level 1,per J-STD-020
- ◇ Terminals:Matte Tin Finish.
  Solderable per MIL-STD-202 Method 208
- ◇ Case Material： Molded Plastic;
  Molding compound meet UL Flammability ClassificationRating 94V-0
- ◇ Case:JEDEC TO-277

MAXIMUM RATING

Ratings at 25℃ ambient tepmerature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum RMS voltage	V_{RWS}	140	V
Maximum DC blocking voltage	V_{DC}	200	V
Maximum average forward rectified current	$I_{F(AV)}$	6.0	A
Peak forward surge current 8.3ms half-sine-wave	I_{FSM}	150	A
I^2t Rating for Fusing(t<8.3ms)	I^2t	93.375	A^2s
Typical Thermal Resistance	$R_{\Theta JA}$	85	℃/W
	$R_{\Theta JC}$	3.0	℃/W
Typical junction capacitance: VR=4.0v,f=1MHz	C_J	35	pF
Junction temperature	T_J	175	℃
Storage temperature range	T_{STG}	-55~175	℃

ELELTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	VALUE			UNITS
				Min	Typ	Max	
Breakdown voltage per diode(min)	IR=0.1mA		V_{BR}	200	-	-	V
Instantaneous forward voltage	IF=6.0A	TA= 25℃	VF	-	0.85	0.94	V
		TA= 125℃	VF	-	0.75	0.80	V
Maximum DC reverse current @Rated DC Blocking Vlotage	T_A= 25℃		IR	-	0.1	2.0	μA
	T_A=125℃		IR	-	5.0	20	μA
Revese Recovery Time (I_F=0.5A，I_R=1.0A，I_{RR}=0.25A)		MURS620	trr	-	20	25	ns

ODERING PACK INFORMATION

Part No.	Packge	Pcking	Carton Size L×W×H(mm)	Quatity(pcs/carton)
MURS620	TO-277	5000pcs/REEL	510×380×360	80000

RATING AND CHARACTERISTICS CURVES

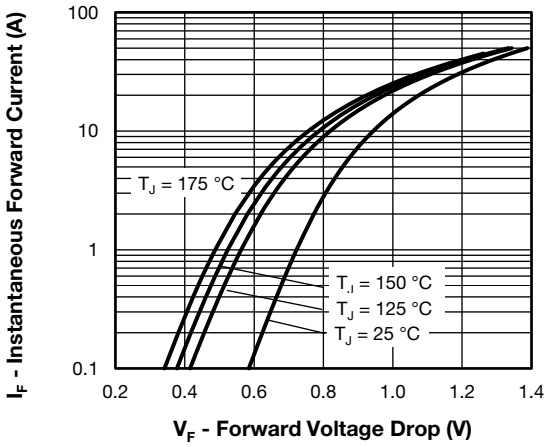


Fig. 1 - Typical Forward Voltage Drop Characteristics

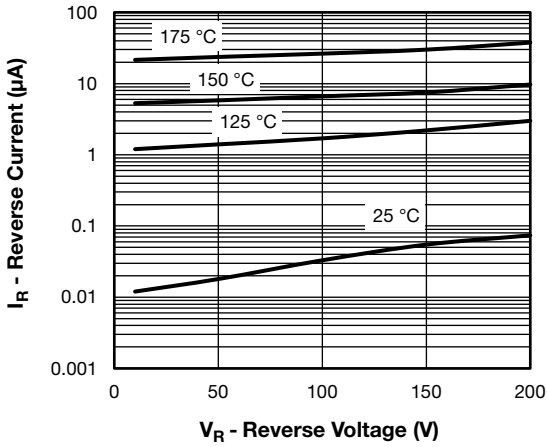


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage

RATING AND CHARACTERISTICS CURVES

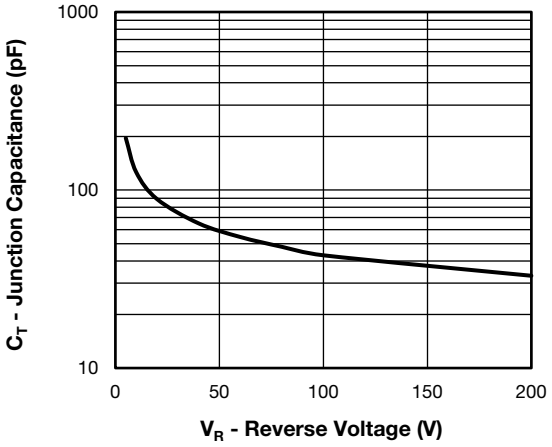


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

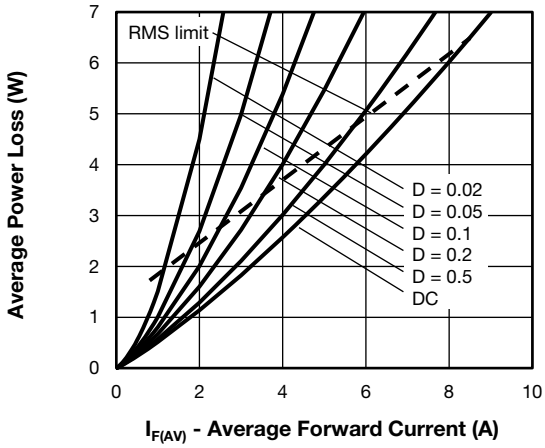


Fig. 5 - Forward Power Loss Characteristics

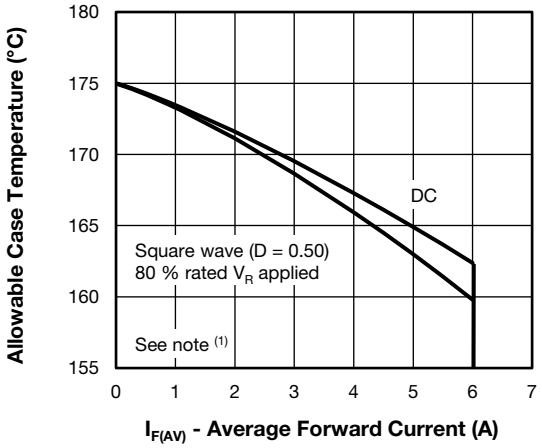


Fig. 4 - Maximum Allowable Case Temperature vs. Average Forward Current

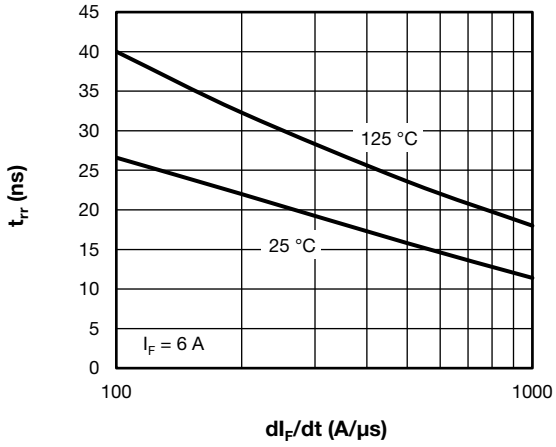


Fig. 6 - Typical Reverse Recovery Time vs. dI_F/dt

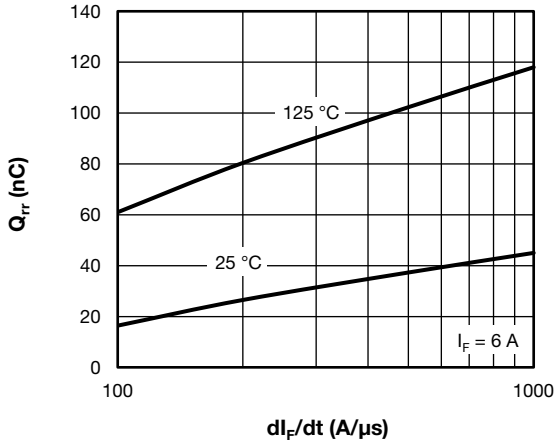


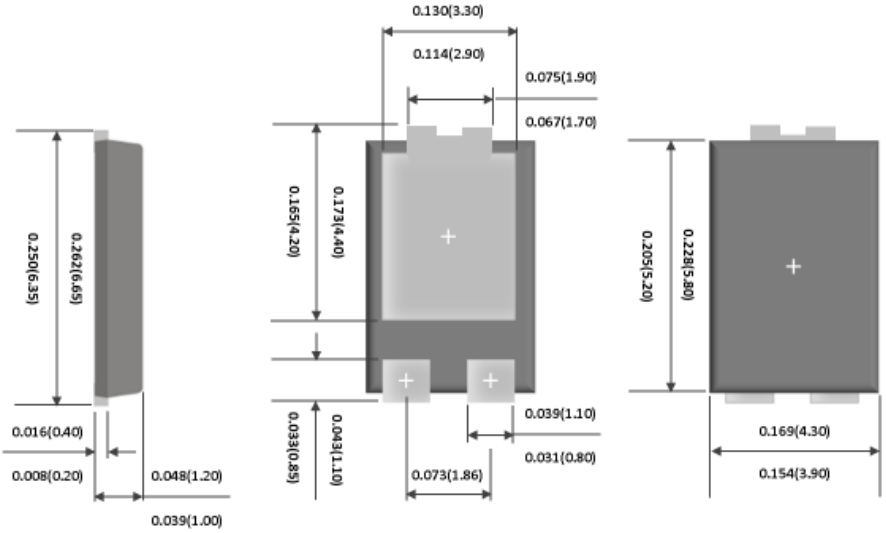
Fig. 7 - Typical Stored Charge vs. dI_F/dt

Note

(1) Formula used: $T_C = T_J - (Pd + Pd_{REV}) \times R_{thJC}$;
Pd = forward power loss = $I_{F(AV)} \times V_{FM}$ at ($I_{F(AV)}$/D) (see fig. 5);
Pd_{REV} = inverse power loss = $V_{R1} \times I_R$ (1 - D); I_R at V_{R1} = rated V_R

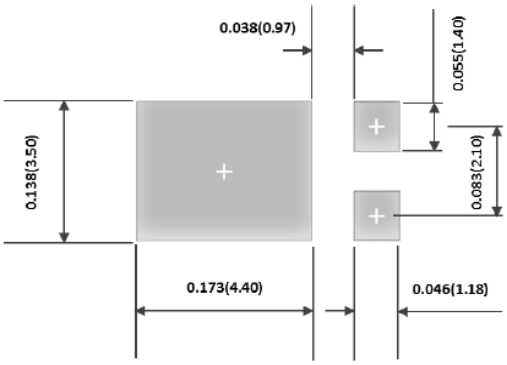
PACKAGE OUTLINE DIMENSIONS

TO-277 PACKAGE OUTLINE DIMENSIONS



unit: mm

FOOT PRINT RECOMMENDATION



unit: mm