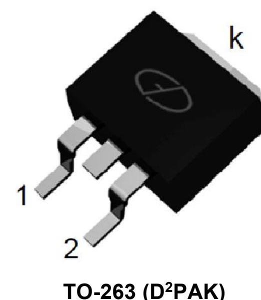
GOOD-ARK SEMICONDUCTOR

MURB820

Super Fast Recovery Planar Rectifier
Reverse Voltage 200 Volts Forward Current 8 Amperes

Features

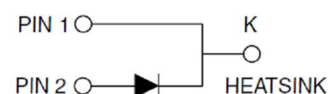
- FRED (Planar) wafer construction
- Super fast recovery time
- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



TO-263 (D^2PAK)

Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.4grams (approximately)
- Finish: All external surfaces corrosion resistant and terminal leads are readily solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube or tape reel packing 800/reel



Schematic Diagram

Maximum Ratings & Electrical Characteristics

(T_A=25°C unless otherwise specified)

Parameter	Test Conditions		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage			V_{RRM}	200	V
Working Peak Reverse Voltage			V_{RWM}	200	V
Maximum DC Blocking Voltage			V_{DC}	200	V
Maximum Average Forward Rectified Current at T_c=105°C Total Device per Diode			$I_F(AV)$	8	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load per Diode			I_{FSM}	125	A
Voltage Rate of Change (Rated V_R)			Dv/dt	10000	V/us
Operating Junction Temperature Range			T_J	-55 to+150	°C
Storage Temperature Range			T_{STG}	-55 to+150	°C
Maximum Reverse Recover Time (I_F=0.5Amp, I_R=1.0Amp,Irec=0.25Amp)	Trr		Trr	35	ns
Maximum Instantaneous Forward Voltage per Leg	I_F=8A I_F=8A	T_C=25°C T_C=125°C	V_F	1.00 0.90	V
MaximumReverse Current per Leg at Working Peak Reverse Voltage		T_J=25°C T_J=100°C	I_R	10 500	uA uA

Thermal Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	TYP (TO-263)	Unit
$R_{θJC}$	Thermal Resistance, Junction to Case per Leg	2.0	°C /W
$R_{θJA}$	Thermal Resistance, Junction to Ambient per Leg	62.5	°C /W

Note: Pulse test:300us pulse width, duty cycle=2%

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Ultrafast Recovery Planar Rectifier
Reverse Voltage 200 Volts Forward Current 8 Amperes

Ratings and Characteristics Curves

(T_A=25°C unless otherwise specified)

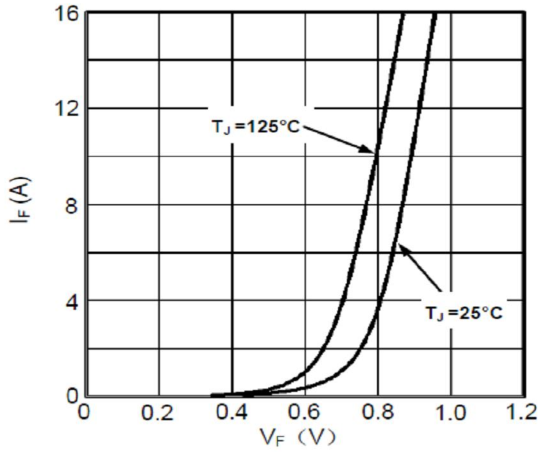


Fig1. Forward Voltage Drop vs Forward Current

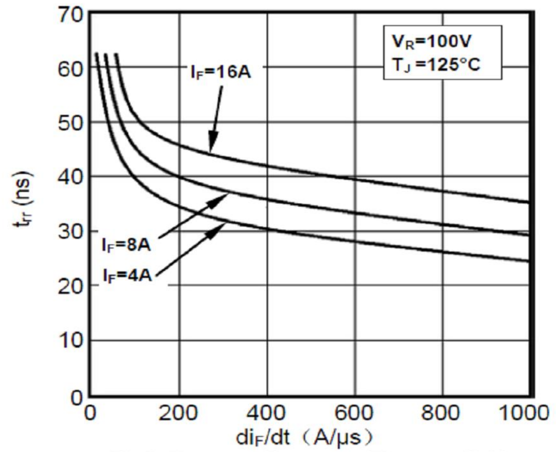


Fig2. Reverse Recovery Time vs di_F/dt

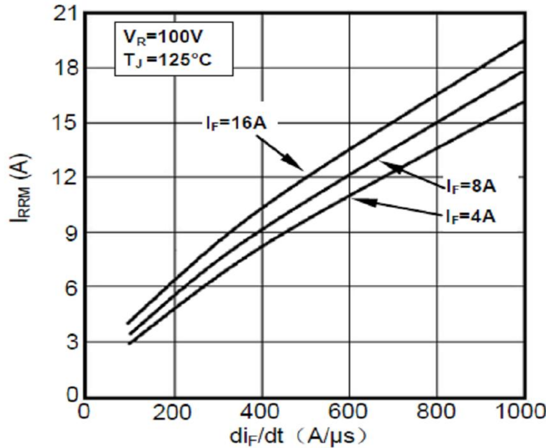


Fig3. Reverse Recovery Current vs di_F/dt

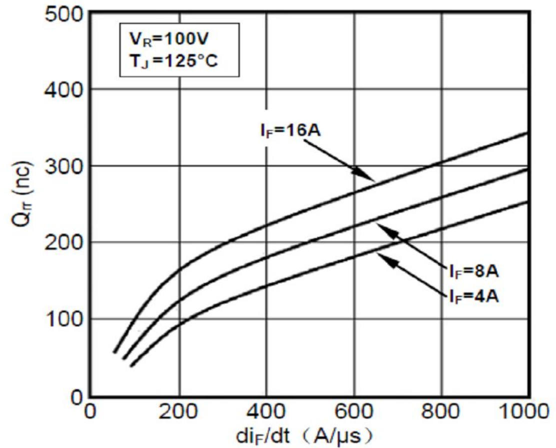


Fig4. Reverse Recovery Charge vs di_F/dt

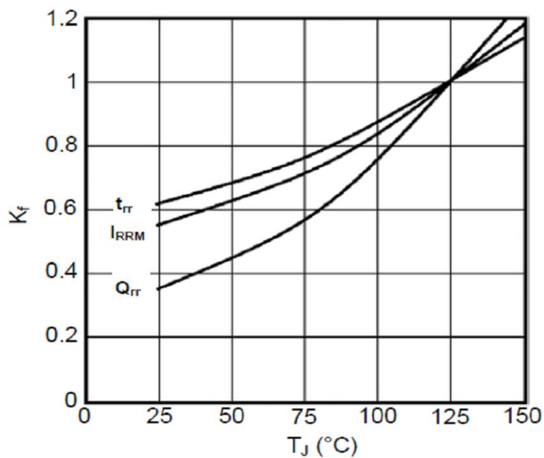


Fig5. Dynamic Parameters vs Junction Temperature

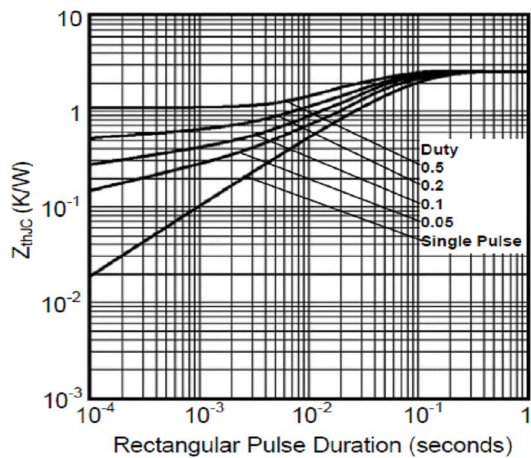
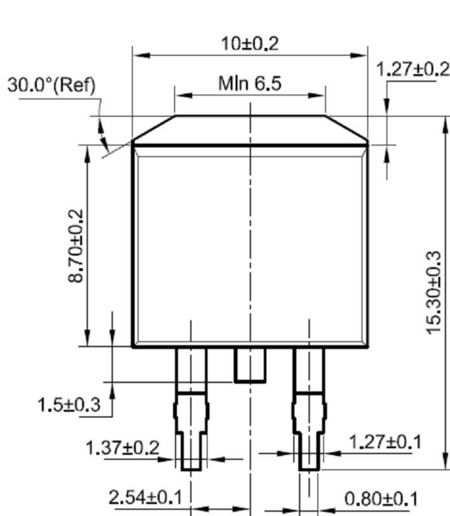
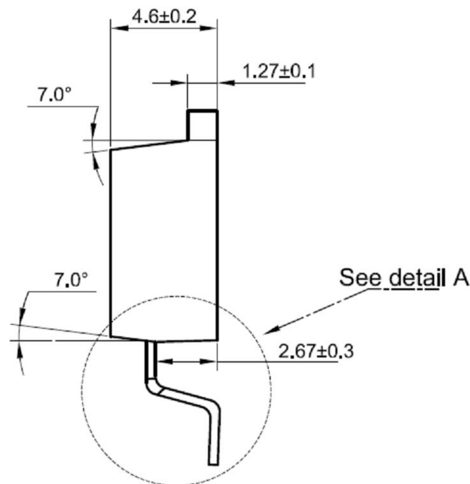


Fig6. Transient Thermal Impedance

Package Outline Dimensions

Unit: millimeters **TO-263 (D^2PAK)**





Detail A