

TECHNICAL DATA  
DATA SHEET 1043, REV.-

**ULTRA LOW REVERSE LEAKAGE  
PLASTIC POWER SCHOTTKY RECTIFIER  
(100 V, 80 A)**

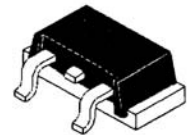
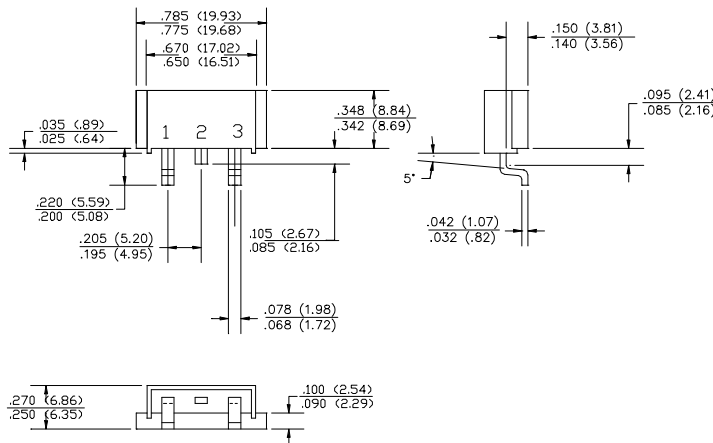
**Applications:**

- Switching Power Supply • Converters • Free-Wheeling Diodes • Polarity Protection Diode

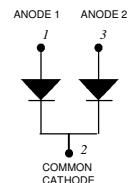
**Features:**

- Ultra low Reverse Leakage Current
- Soft Reverse Recovery at Low and High Temperature
- Low Forward Voltage Drop and 175 °C Operation
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics

**Mechanical Dimensions: In Inches / mm**



**PRM2**



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**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	100	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=132^{\circ}C$ , rectangular wave form	80	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	860	A
Non-Repetitive Avalanche Energy (per leg)	$E_{AS}$	$T_J = 25^{\circ}C$ , $I_{AS} = 1.0 A$ , $L = 30 mH$	15	mJ
Repetitive Avalanche Current (per leg)	$I_{AR}$	$I_{AS}$ decay linearly to 0 in 1 $\mu s$ $f$ limited by $T_J$ max. $V_A=1.5V_R$	1.0	A

**Electrical Characteristics:**

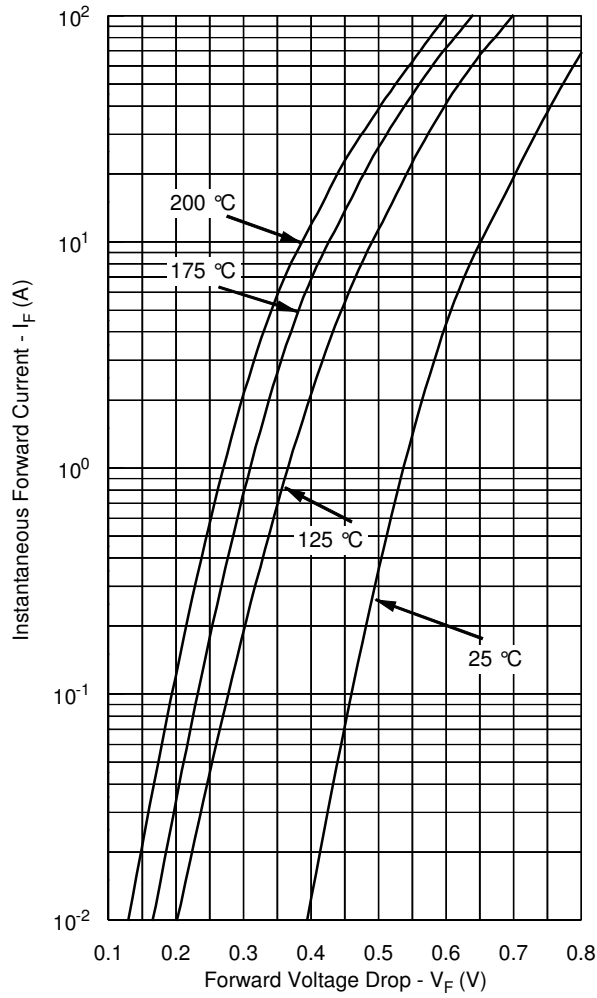
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)	$V_{F1}$	@ 40 A, Pulse, $T_J = 25^{\circ}C$	0.81	V
		@ 80 A, Pulse, $T_J = 25^{\circ}C$	1.0	
	$V_{F2}$	@ 40 A, Pulse, $T_J = 125^{\circ}C$	0.67	V
		@ 80 A, Pulse, $T_J = 125^{\circ}C$	0.82	
Max. Reverse Current (per leg)	$I_{R1}$	@ $V_R = 100V$ , Pulse, $T_J = 25^{\circ}C$	1.5	mA
	$I_{R2}$	@ $V_R = 100V$ , Pulse, $T_J = 125^{\circ}C$	20	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5V$ , $T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$ , $V_{SIG} = 50mV$ (p-p)	1400	pF
Typical Series Inductance (per leg)	$L_S$	Measured lead to lead 5 mm from package body	5.5	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ $\mu s$

**Thermal-Mechanical Specifications:**

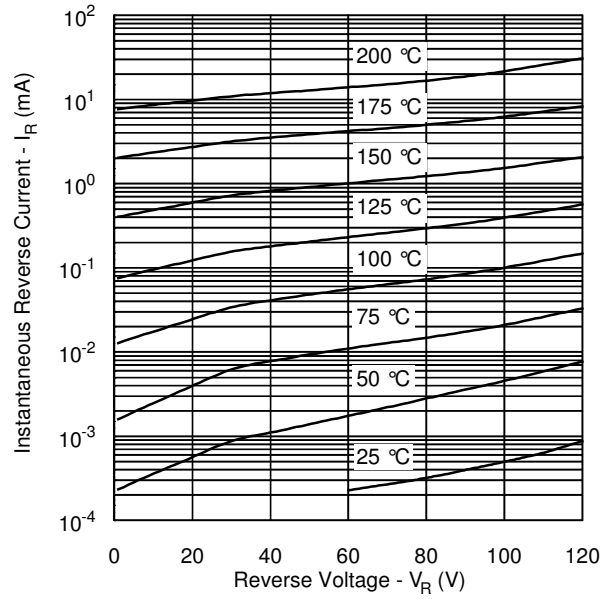
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-65 to +175	$^{\circ}C$
Max. Storage Temperature	$T_{stg}$	-	-65 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.85	$^{\circ}C/W$
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.42	$^{\circ}C/W$
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.30	$^{\circ}C/W$
Approximate Weight	wt	-	7.8	g
Mounting Torque	$T_M$	-	40 (min) 58 (max)	Kg-cm
Case Style		PRM2		

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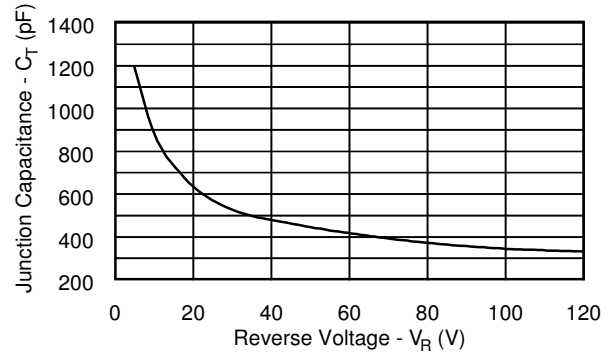
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**TECHNICAL DATA**

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