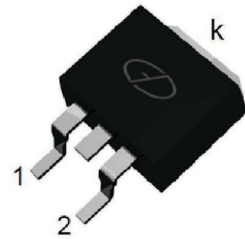


## Features

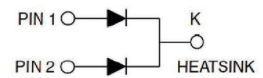
- FRED (Planar) wafer construction
- Ultrafast recovery time
- Low forward voltage drop, low power loss
- High efficiency
- Plastic package has underwriters Laboratory Flammability Classification 94V-0



Package: TO-263 (D<sup>2</sup>PAK)

## Mechanical Data

- Case: Epoxy, molded
- Weight: 1.4 grams (approximately)
- Finish: all external surfaces corrosion resistant and terminal leads readily solderable
- Lead temperature for soldering purposes: 260°C Max. for 10 sec
- 50 units per plastic tube or 800 units per reel



Schematic Diagram

## Maximum Ratings & Electrical Characteristics

(T<sub>A</sub>=25°C unless otherwise noted)

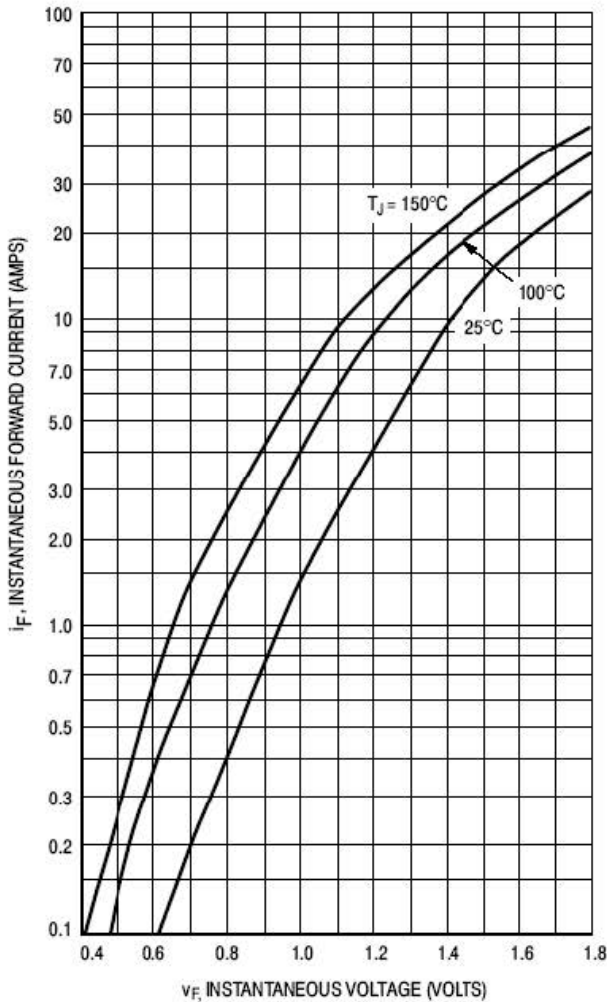
Parameter	Test Conditions		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage			V <sub>RRM</sub>	400	V
Working Peak Reverse Voltage			V <sub>RWM</sub>	400	V
Maximum DC Blocking Voltage			V <sub>DC</sub>	400	V
Maximum Average Forward Rectified Current @ T <sub>c</sub> =105°C	Total Device		I <sub>F(AV)</sub>	10	A
	Per Diode			5	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode			I <sub>FSM</sub>	90	A
Voltage Rate of Change (rated V <sub>R</sub> )			DV/dt	10000	V/μs
Operating Junction Temperature Range			T <sub>J</sub>	- 55 to+150	°C
Storage Temperature Range			T <sub>STG</sub>	- 55 to+150	°C
Maximum Reverse Recover Time (I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rec</sub> =0.25A)			T <sub>rr</sub>	50	ns
Maximum Instantaneous Forward Voltage per Leg	I <sub>F</sub> =5A	T <sub>C</sub> =25°C	V <sub>F</sub>	1.30	V
	I <sub>F</sub> =5A	T <sub>C</sub> =125°C		1.20	
Maximum Reverse Current per Leg at Working Peak Reverse Voltage		T <sub>J</sub> =25°C	I <sub>R</sub>	10	μA
		T <sub>J</sub> =100°C		500	μA

### Thermal Characteristics T<sub>A</sub>=25°C unless otherwise noted

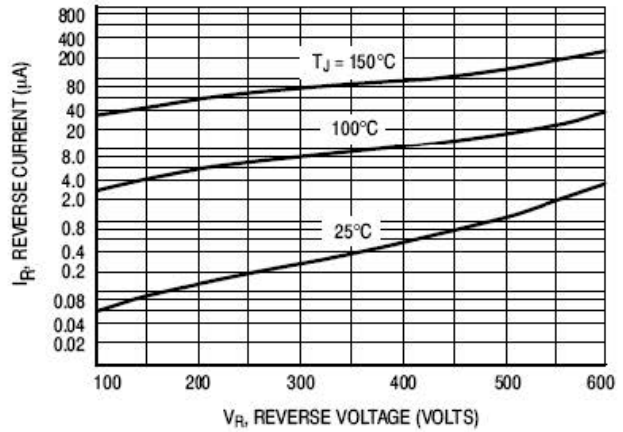
Symbol	Parameter	Typ.	Unit
R <sub>θJC</sub>	Thermal Resistance, Junction to Case per Leg	2.0	°C/W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient per Leg	62.5	°C/W

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

**Ratings and Characteristics Curves** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

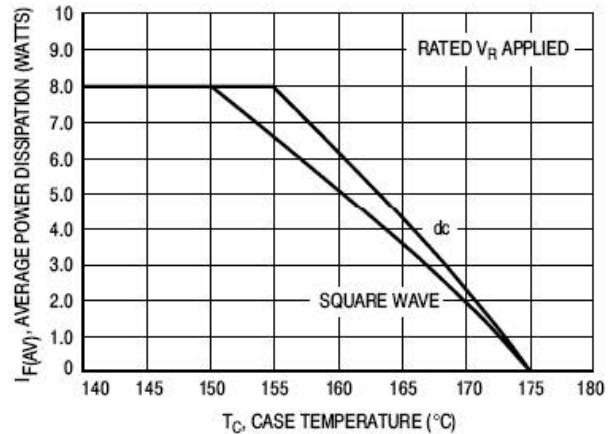


**Figure 1. Typical Forward Voltage, Per Leg**

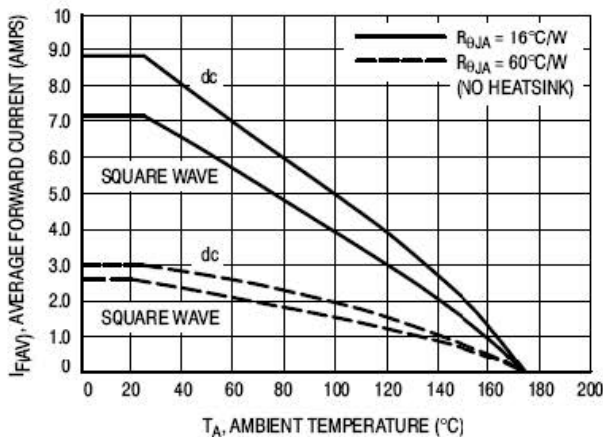


**Figure 2. Typical Reverse Current, Per Leg\***

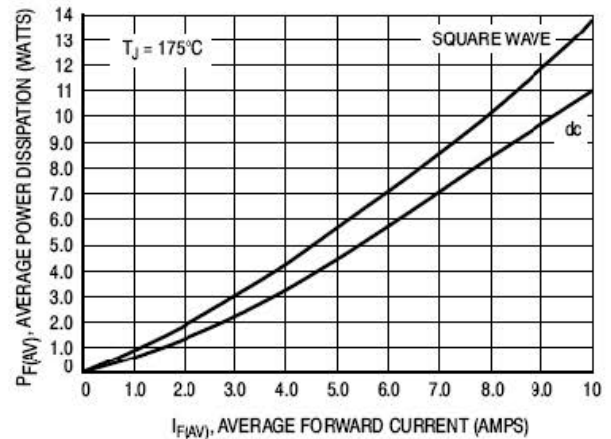
\* The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if  $V_R$  is sufficiently below rated  $V_R$ .



**Figure 3. Current Derating, Case, Per Leg**



**Figure 4. Current Derating, Ambient, Per Leg**

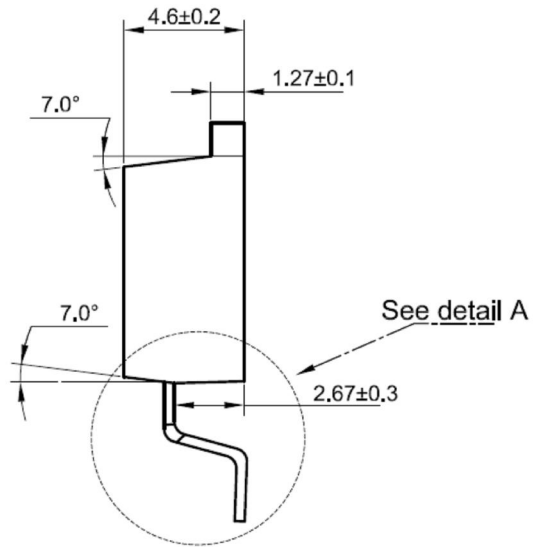
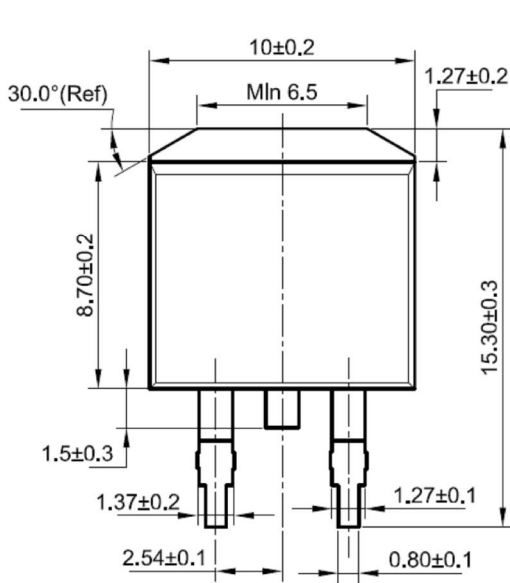


**Figure 5. Power Dissipation, Per Leg**

**Package Outline Dimensions**

in millimeters

TO-263 (D<sup>2</sup>PAK)



**Detail A**

