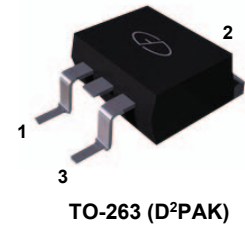


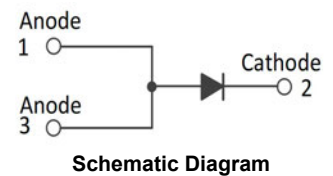
Features

- Low forward voltage, low power loss
- Low leakage current
- High surge current
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



Applications

- SMPS
- Adapter
- Server Power



Mechanical Data

- Case: Epoxy, molded
- Finish: All external surfaces corrosion resistant and terminal leads are readily solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	300	V
Maximum RMS Voltage	V _{RMS}	210	V
Maximum DC Blocking Voltage	V _{DC}	300	V
Maximum Average Forward	I _{F(AV)}	20	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load Per Diode	I _{FSM}	180	A
Thermal Resistance, Junction to Case	R _{θJC}	2	°C/W
Thermal Resistance, Junction to Ambient	R _{θJA}	62.5	°C/W
Operating Junction Temperature Range	T _J	-55 To +150	°C
Storage Temperature Range	T _{STG}	-55 To +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Typ.	Max.	Unit
Forward Drop Voltage ¹	V _F	I _F =10A, T _J =25°C	0.8	0.88	V
		I _F =10A, T _J =125°C	0.67	-	
		I _F =20A, T _J =25°C	0.87	0.95	
		I _F =20A, T _J =125°C	0.75	0.85	
Reverse Leakage Current @ V _R ²	I _R	T _J =25°C	-	100	μA
		T _J =100°C	-	10	mA

Note:

1. Pulse test: pulse width=0.3ms, duty cycle=2%
2. Pulse test: pulse width=30ms

Ratings and Characteristics Curves

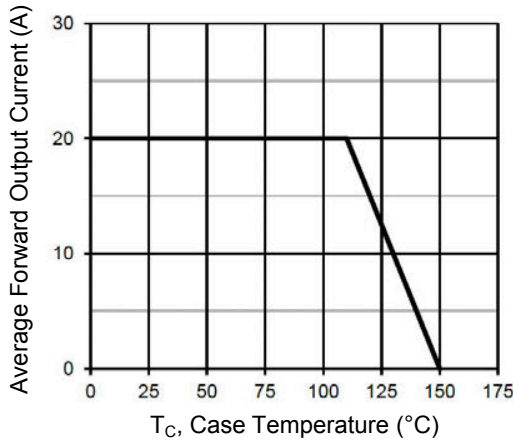


Figure 1. Forward Current Derating Curve

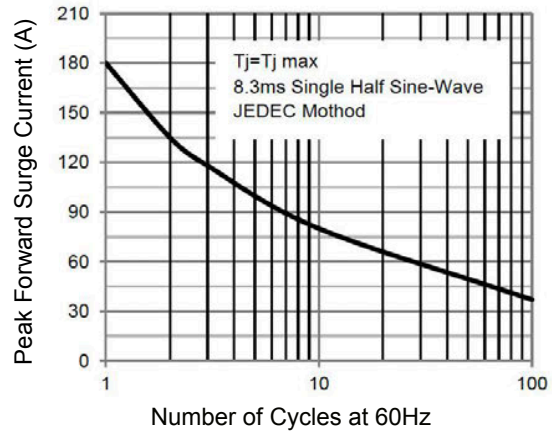


Figure 2. Maximum Non-Repetitive Surge Current

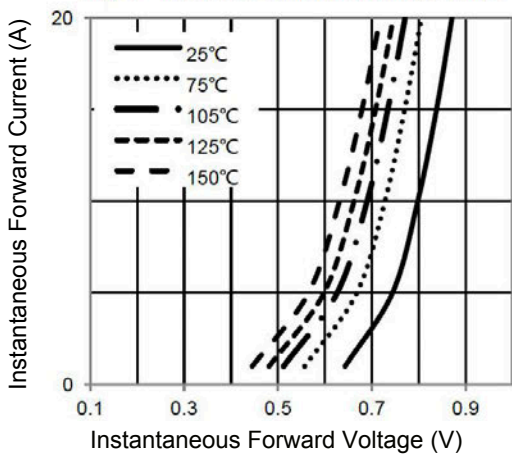


Figure 3. Typical Forward Voltage Characteristic

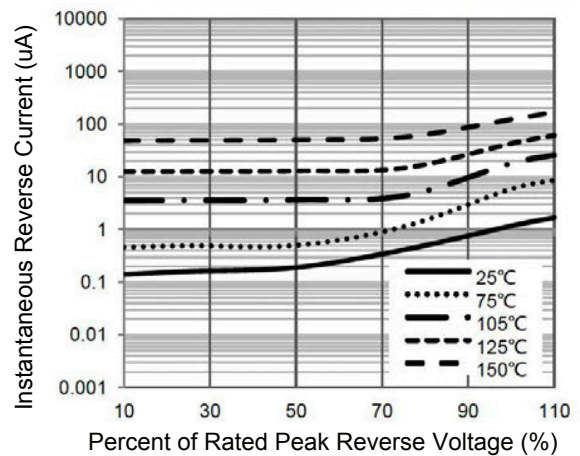


Figure 4. Typical Reverse Current Characteristics

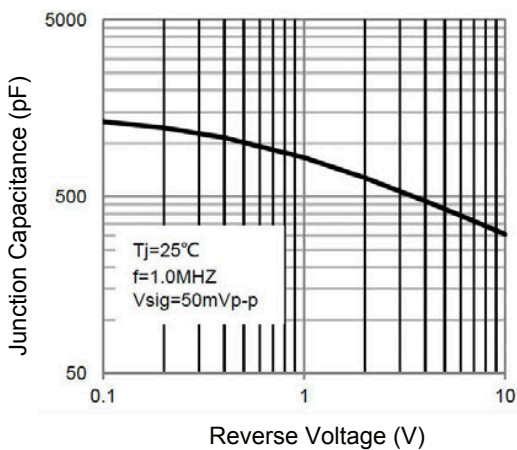
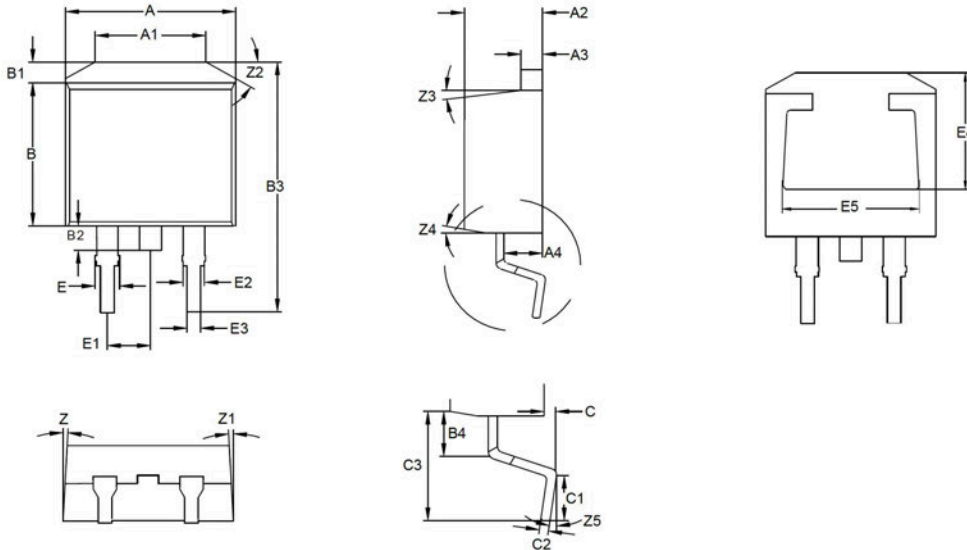


Figure 5. Typical Junction Capacitance

Package Outline Dimensions TO-263 (D²PAK)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	9.800	10.200	0.386	0.402
A1	6.500	-	0.256	-
A2	4.400	4.800	0.173	0.189
A3	1.170	1.370	0.046	0.054
A4	2.370	2.970	0.093	0.117
B	8.500	8.900	0.335	0.350
B1	1.070	1.470	0.042	0.058
B2	1.200	1.800	0.047	0.071
B3	15.000	15.600	0.591	0.614
B4	1.800	2.200	0.071	0.087
C	0.000	0.250	0.000	0.010
C1	2.340	2.740	0.092	0.108
C2	0.300	0.600	0.012	0.024
C3	5.000	5.600	0.197	0.220
E	1.170	1.570	0.046	0.062
E1	2.440	2.640	0.096	0.104
E2	1.170	1.370	0.046	0.054
E3	0.700	0.900	0.028	0.035
E4	7.100		0.280	
E5	8.700		0.343	
Z	3°		3°	
Z1	3°		3°	
Z2	30°		30°	
Z3	7°		7°	
Z4	7°		7°	
Z5	0°	8°	0°	8°