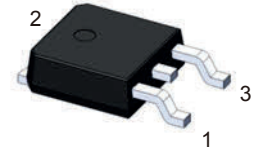


Features

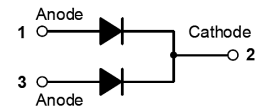
- Low forward voltage, low power loss
- Low leakage current
- High surge current
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



TO-252 (DPAK)

Applications

- SMPS
- Adapter
- Server power



Schematic Diagram

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}	200	V
Maximum RMS Voltage	V _{RWS}	140	V
Maximum DC Blocking Voltage	V _{DC}	200	V
Maximum Average Forward Current	I _{F(AV)}	20	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load per Diode	I _{FSM}	150	A
Typical Thermal Resistance, Junction to Case	R _{θJC}	4.0	°C/W
Typical 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	0.85	0.92	V
		I _F =10A, T _J =125°C	-	0.82	
Reverse Leakage Current @ V _R ²	I _R	T _J =25°C	-	50	uA
		T _J =100°C	-	5	mA

Note:

1. Pulse test with PW=0.3ms, duty cycle=2%
2. Pulse test with PW=30ms

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

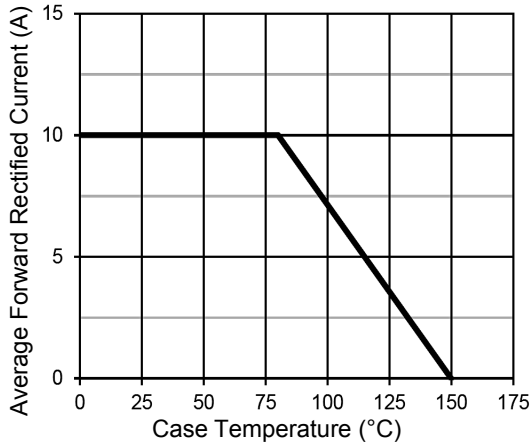


Figure 1. Forward Current Derating Curve

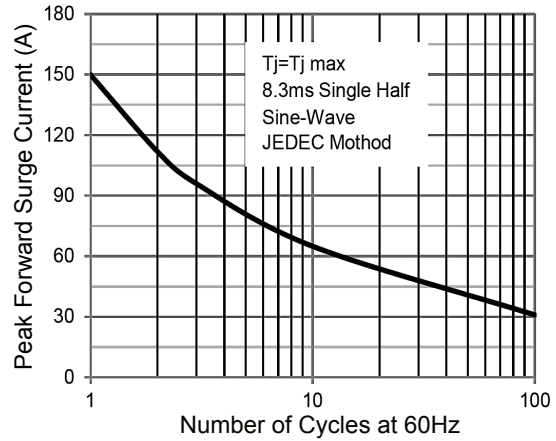


Figure 2. Maximum Non-Repetitive Surge Current

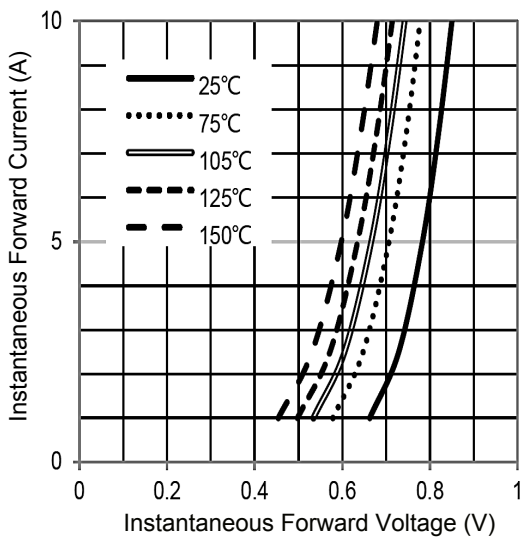


Figure 3. Typical Forward Voltage Characteristics

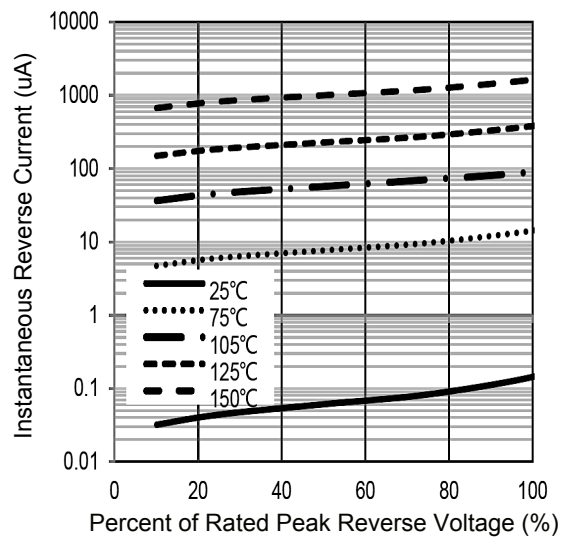


Figure 4. Typical Reverse Current Characteristics

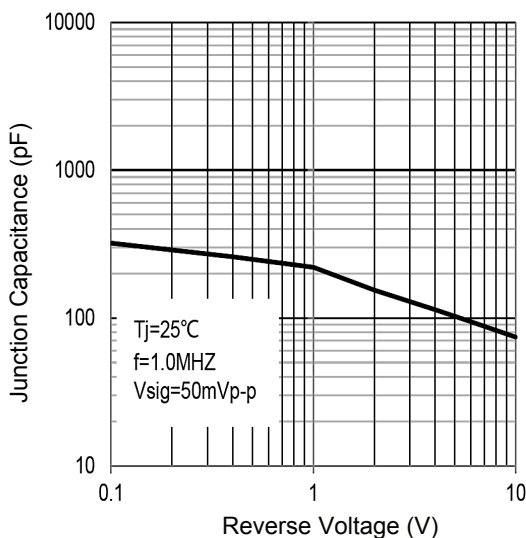
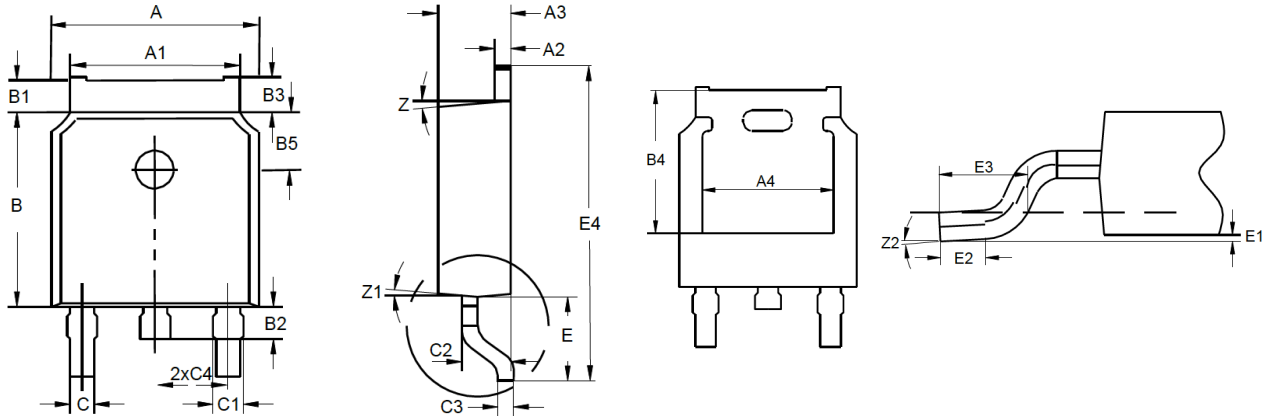


Figure 5. Typical Junction Capacitance

Package Outline Dimensions TO-252 (DPAK)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	6.34	6.74	0.250	0.265
A1	5.10	5.50	0.201	0.217
A2	0.40	0.60	0.016	0.024
A3	2.08	2.48	0.082	0.098
A4	4.60	5.00	0.181	0.197
B	5.80	6.40	0.228	0.252
B1	0.82	1.22	0.032	0.048
B2	0.80	1.20	0.031	0.047
B3	0.90	1.30	0.035	0.051
B4	5.05	5.45	0.199	0.215
B5	7.83	8.23	0.308	0.324
C	0.56	0.96	0.022	0.038
C1	0.65	1.05	0.026	0.041
C2	1.34	1.74	0.053	0.069
C3	0.40	0.60	0.016	0.024
C4	2.09	2.49	0.082	0.098
E	2.60	3.20	0.102	0.126
E1	0.00	0.15	0.000	0.006
E2	0.70	-	0.028	-
E3	1.30	1.90	0.051	0.075
E4	9.80	10.40	0.386	0.409
Z	7° NOM		7° NOM	
Z1	7° NOM		7° NOM	
Z2	0°	10°	0°	10°

Order Information

Device	Package	Marking	Packaging	SPQ
GSMBRD20200CT	TO-252 (DPAK)	MBRD20200CT	Tape & Reel	2,500 Pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com