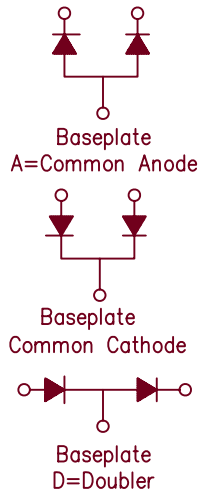
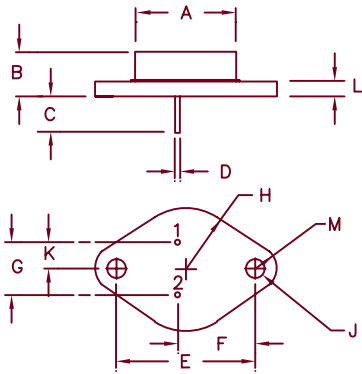


Silicon Dual Power Rectifier ST3020 — ST30100



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	—	.875	—	22.23	Dia.
B	.250	.450	6.35	11.43	
C	.312	—	7.92	—	
D	.038	.043	.97	1.09	Dia.
E	1.177	1.197	29.90	30.40	
F	.655	.675	16.64	17.15	
G	.420	.440	10.67	11.18	
H	—	.525	—	13.34	Rad.
J	.151	.161	3.84	4.09	Dia.
K	.205	.225	5.21	5.72	
L	—	.135	—	3.43	
M	—	.188	—	4.78	Rad.

TO-204AA (TO-3)

Microsemi Catalog Number	Peak Reverse Voltage
ST3010*	100V
ST3020*	200V
ST3040*	400V
ST3060*	600V
ST3080*	800V
ST30100*	1000V

*Add D, C, or A

- Glass Passivated Die
- Glass to metal seal construction
- VRRM 200 to 1000V
- 250A Surge Rating
- Available as Common Anode, Common Cathode, or Doubler

Electrical Characteristics		
Average forward current per leg (standard)	IF(AV) 15 Amps	TC = 125°C, half sine wave, RθJC = 1.4°C/W TC = 82°C, half sine wave, RθJC = 2.2°C/W 8.3ms, half sine, TJ = 200°C
Average forward current per leg (reverse)	IF(AV) 15 Amps	
Maximum surge current	IFSM 250 Amps	
Max I ² t for fusing	I ² t 260 A ² s	
Max peak forward voltage	VFM 1.2 Volts	IFM = 15A: TJ = 25°C*
Max peak reverse current	IRM 10 μA	VRRM, TJ = 25°C
Max peak reverse current	IRM 1.0 mA	VRRM, TJ = 150°C
Max Recommended Operating Frequency	10kHz	

*Pulse test: Pulse width 300 μsec. Duty cycle 2%

Thermal and Mechanical Characteristics		
Storage temperature range	TSTG	-65°C to 200°C
Operating junction temp range	TJ	-65°C to 200°C
Maximum thermal resistance (standard polarity)	RθJC	1.4°C/W Junction to Case
Maximum thermal resistance (reverse polarity)	RθJC	2.2°C/W Junction to Case
Typical thermal resistance (greased)	RθCS	0.5°C/W Case to sink
Weight		1.0 ounces (28 grams) typical



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05-02-07 Rev. 2

ST3020 — ST30100

Figure 1
Typical Forward Characteristics — Per Leg

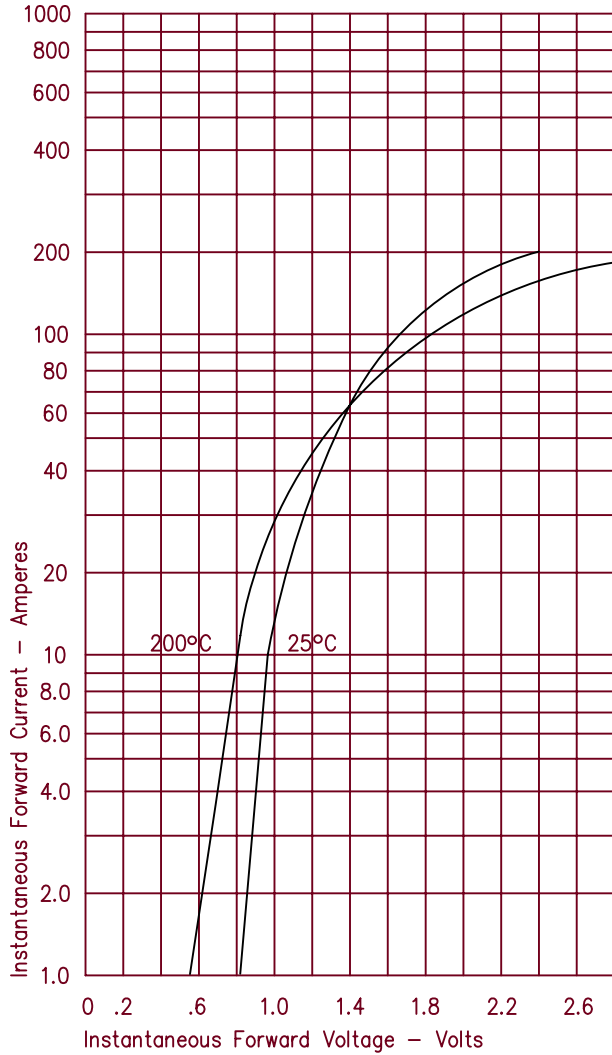


Figure 2
Typical Reverse Characteristics — Per Leg

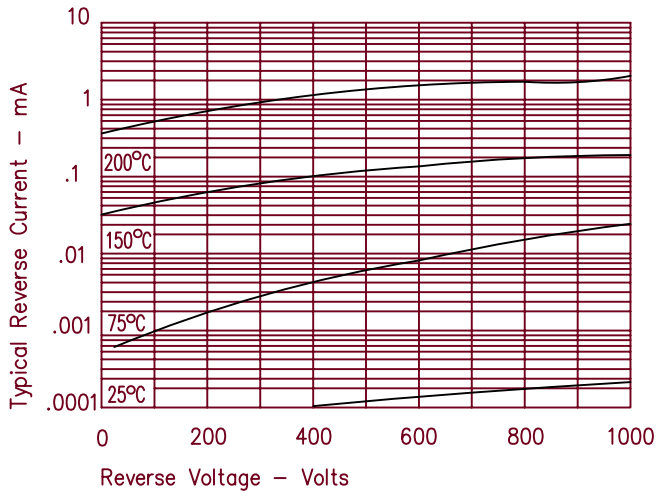


Figure 3
Forward Current Derating — Per Leg — Standard Polarity

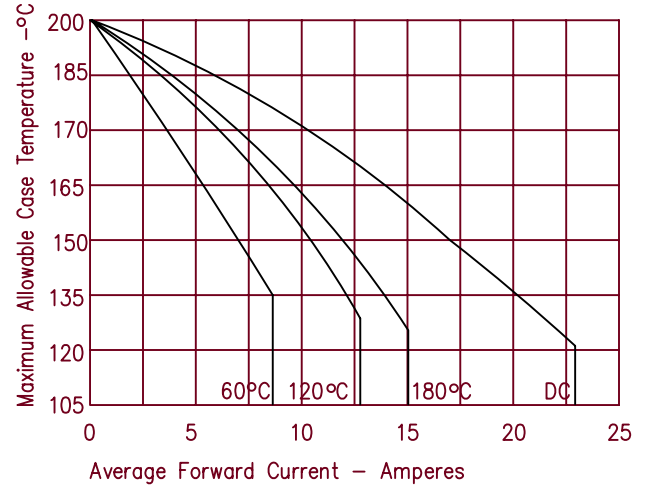


Figure 4
Maximum Forward Power Dissipation — Per Leg — Standard Polarity

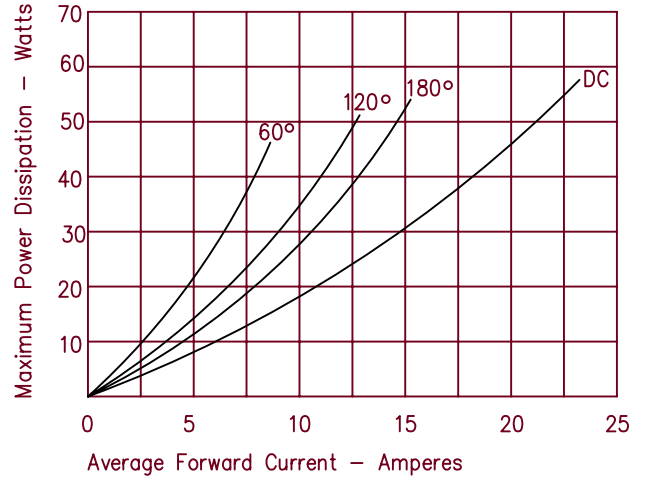


Figure 5
Forward Current Derating — Per Leg — Reverse Polarity

