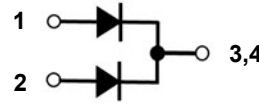


GS12A30JCT

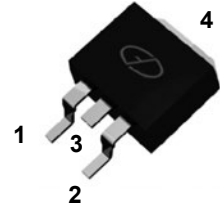
Schottky Barrier Rectifier
 Reverse Voltage 30V Forward Current 12A

Features

- Low forward voltage drop, low power losses
- High efficiency operation
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- MSL level 1, per J-STD-020



Schematic Diagram



TO-263 (D²PAK)

Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.40 grams approximately
- Lead temperature for soldering purposes: 260°C Max. for 10 sec



Maximum Ratings (T_A=25°C otherwise specified)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	30	V
Max DC Reverse Voltage	V _R	30	V
Maximum Average Forward Rectified Current at T _C =135°C, Total Device	I _{F(AV)}	12	A
Maximum Average Forward Rectified Current at T _C =135°C, Per Diode		6	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load Per Diode	I _{FSM}	150	A
Thermal Resistance, Junction to Case per Leg	R _{θJC}	2.2	°C/W
		1.3	
Thermal Resistance, Junction to Ambient per Leg	R _{θJA}	65	°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 otherwise specified)

Parameter	Symbol	Test Condition	Typ	Unit
Maximum Instantaneous Forward Voltage per Leg	V _F	I _F =6A, T _J =25°C	0.47	V
		I _F =12A, T _J =25°C	0.55	
		I _F =6A, T _J =125°C	0.38	
		I _F =12A, T _J =125°C	0.49	
Maximum Reverse Current per Leg	I _R	V _R =30V, T _J =25°C	1	mA
		V _R =30V, T _J =125°C	60	
Typical Junction Capacitance per Leg	C _T	V _R =5V _{DC} (100KHz to 1MHz), 25°C	590	pF

Note:
 V_F and I_R Tested under Pulse width < 300 μs, duty cycle < 2 %

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

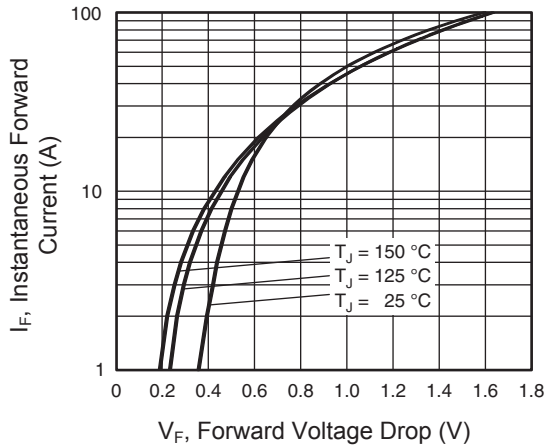


Figure 1. Maximum Forward Voltage Drop Characteristics (Per Leg)

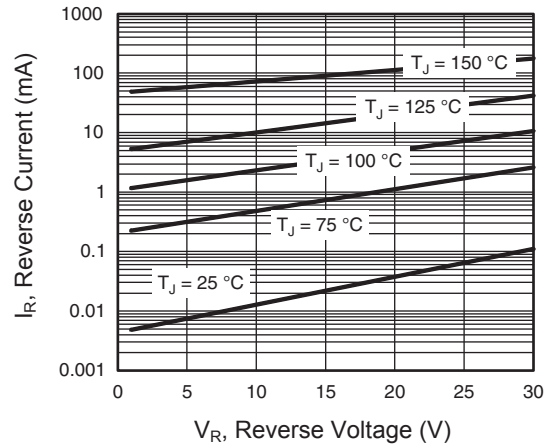


Figure 2. Typical Values of Reverse Current vs. Reverse Voltage (Per Leg)

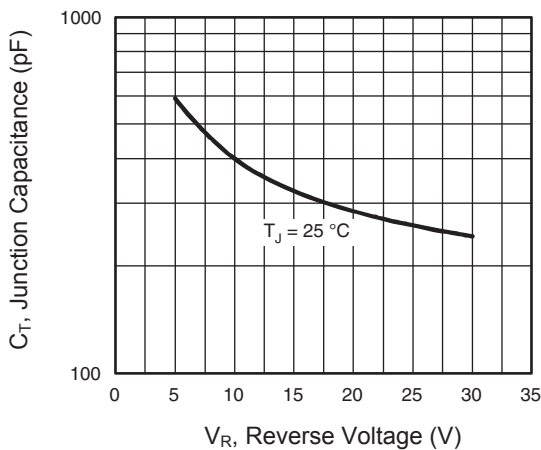


Figure 3. Typical Junction Capacitance vs. Reverse Voltage (Per Leg)

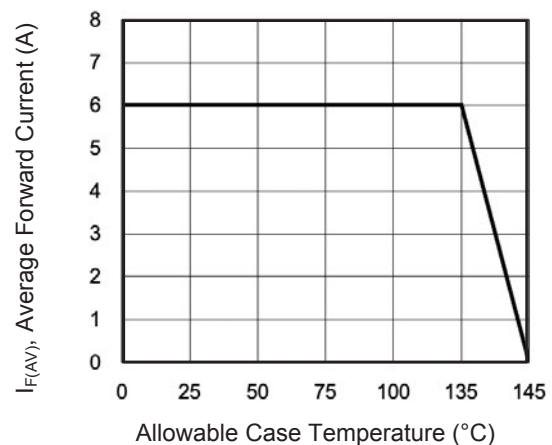
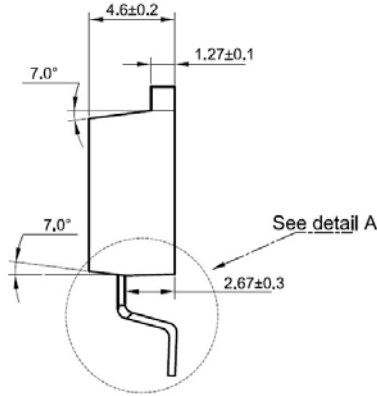
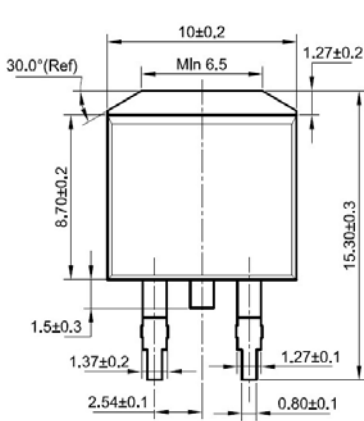


Figure 4. Maximum Allowable Case Temperature vs. Average Forward Current (Per Leg)

Package Outline Dimensions (TO-263)

Unit: mm



Detail A

