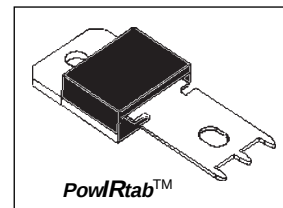


SCHOTTKY RECTIFIER

100 Amp



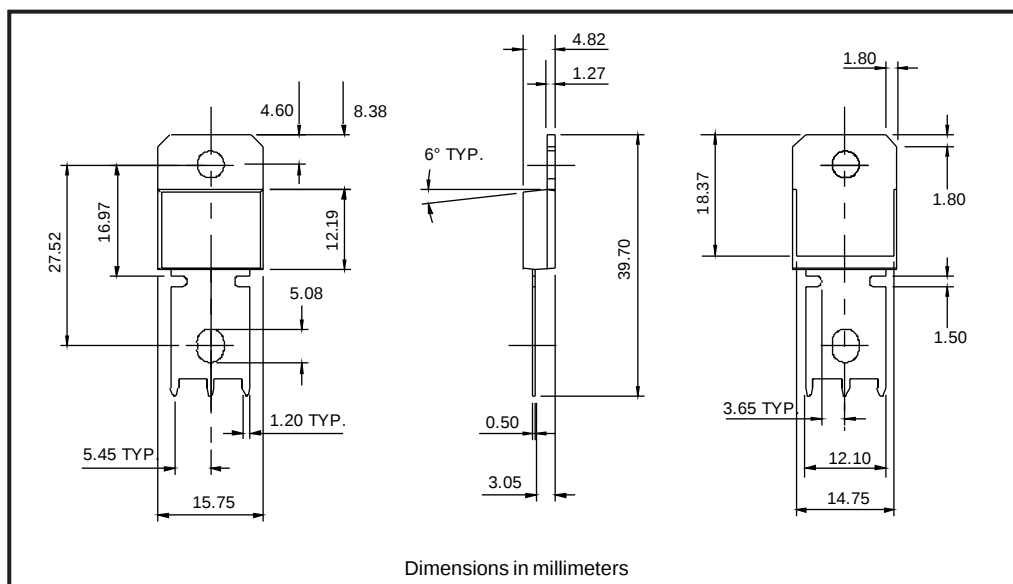
Major Ratings and Characteristics

Characteristics	100BGQ015	Units
$I_{F(AV)}$ Rectangular waveform	100	A
V_{RRM}	15	V
I_{FSM} @ $t_p = 5 \mu s$ sine	7500	A
V_F @ 100 Apk, $T_J = 25^\circ C$	0.41	V
T_J range	-65 to 100	$^\circ C$

Description/Features

The NEW 100BGQ015 Schottky rectifier has been optimized for ultra low forward voltage drop specifically for the OR-ing of parallel power supplies. The proprietary barrier technology allows for reliable operation up to $100^\circ C$ junction temperature. Typical applications are in parallel switching power supplies, converters, reverse battery protection, and redundant power subsystems.

- $100^\circ C$ T_J operation
- Optimized for OR-ing applications
- Ultra low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- **PowIRtab™ package**



Voltage Ratings

Part number	100BGQ015
V_R Max. DC Reverse Voltage (V)	15
V_{RWM} Max. Working Peak Reverse Voltage (V)	25

Absolute Maximum Ratings

Parameters	100BGQ	Units	Conditions
$I_{F(AV)}$ Max. Average Forward Current	100	A	50% duty cycle @ $T_C = 60^\circ\text{C}$, rectangular wave form
I_{FSM} Max. Peak One Cycle Non-Repetitive Surge Current	7500	A	5 μs Sine or 3 μs Rect. pulse
	1200		10ms Sine or 6ms Rect. pulse
E_{AS} Non-Repetitive Avalanche Energy	9	mJ	$T_J = 25^\circ\text{C}$, $I_{AS} = 2\text{Amps}$, $L = 4.5\text{mH}$
I_{AR} Repetitive Avalanche Current	2	A	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. $V_A = 3 \times V_R$ typical

Electrical Specifications

Parameters	100BGQ	Units	Conditions
V_{FM} Max. Forward Voltage Drop (1)	0.42	V	@ 100A
	0.54	V	@ 200A
	0.38	V	@ 100A
	0.54	V	@ 200A
I_{RM} Max. Reverse Leakage Current (1)	20	mA	$T_J = 25^\circ\text{C}$
	1000	mA	$T_J = 100^\circ\text{C}$
	890	mA	$T_J = 100^\circ\text{C}$
	540	mA	$T_J = 100^\circ\text{C}$
C_T Max. Junction Capacitance	3600	pF	$V_R = 5V_{DC}$, (test signal range 100Khz to 1Mhz) 25°C
L_S Typical Series Inductance	3.5	nH	Measured from tab to mounting plane
dv/dt Max. Voltage Rate of Change (Rated V_R)	10,000	V/ μs	

(1) Pulse Width < 300 μs , Duty Cycle < 2%

Thermal-Mechanical Specifications

Parameters		100BGQ	Units	Conditions
T _j	Max. Junction Temperature Range	-65 to 100	°C	
T _{stg}	Max. Storage Temperature Range	-65 to 100	°C	
R _{thJC}	Max. Thermal Resistance Junction to Case	0.65	°C/W	DC operation
R _{thCS}	Typical Thermal Resistance, Case to Heatsink	0.15	°C/W	Mounting surface, smooth and greased
wt	Approximate Weight	5(0.18)	g(oz.)	
T	Mounting Torque	Min.	1.2(10)	N*m (lbf-in)
		Max.	2.4(20)	
Case Style		PowIRtab™		