TECHNICAL DATA
DATA SHEET

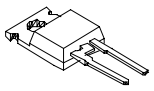
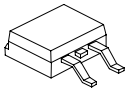
8TQ150/8TQ150S SCHOTTKY RECTIFIER

Applications:

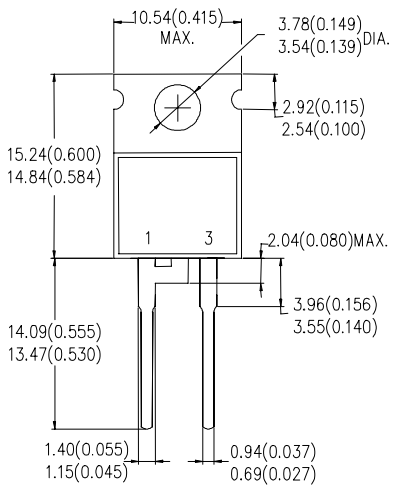
- **Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection**

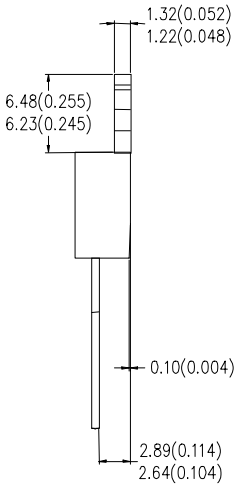
Features:

- **175°C T_J operation**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **Low forward voltage drop**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**

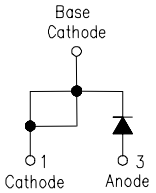
Case Styles	
8TQ150	**8TQ150S**
	
TO-220	**D^2PAK**

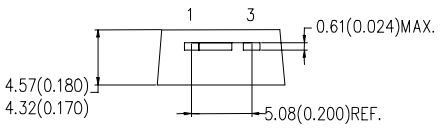
Mechanical Dimensions: In Inches / mm

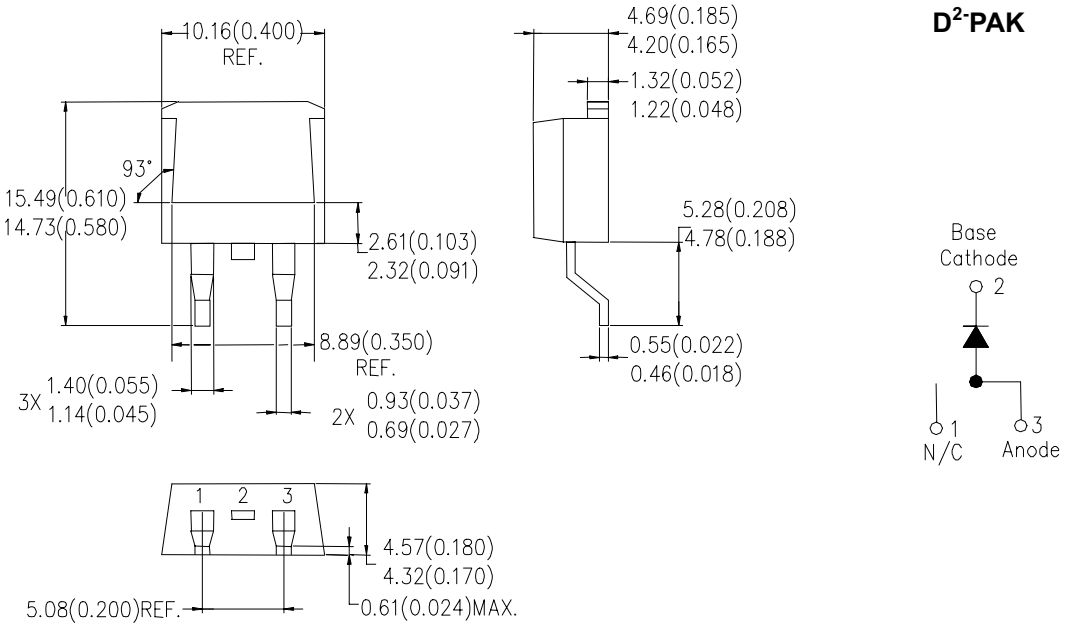




TO-220AC







Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	150	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C =116°C, rectangular wave form	8.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	276	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 8A, Pulse, T_J = 25 °C	0.76	V
	V_{F2}	@ 8A, Pulse, T_J = 125 °C	0.62	V
Max. Reverse Current	I_{R1}	@V_R = Rated V_R, Pulse, T_J = 25 °C	0.55	mA
	I_{R2}	@V_R = Rated V_R, Pulse, T_J = 125 °C	7	mA
Max. Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	500	pF
Typical Series Inductance	L_S	Measured lead to lead 5 mm from package body	8	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/µs

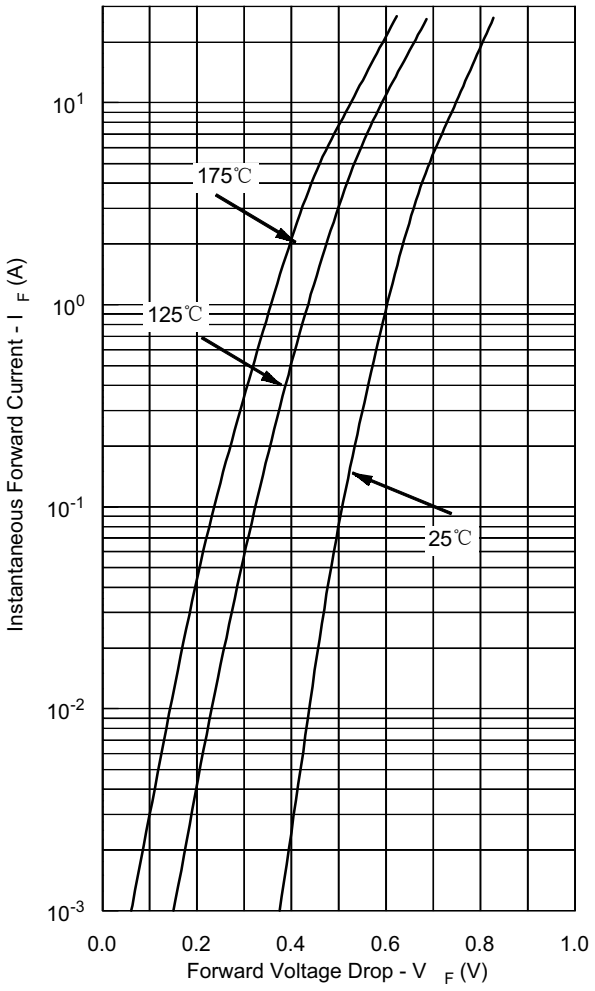
* Pulse Width < 300µs, Duty Cycle < 2%

Thermal-Mechanical Specifications:

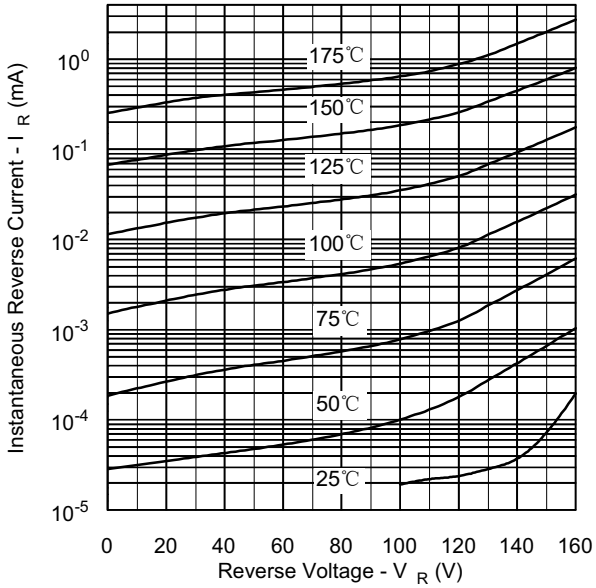
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	°C
Max. Storage Temperature	T_{stg}	-	-55 to +175	°C
Maximum Thermal Resistance	$R_{\theta JC}$	DC operation	2.0	°C/W

Junction to Case (per leg)				
Typical Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.50	°C/W
Approximate Weight	wt	-	2	g
Mounting Torque	T_M	-	6 (min) 12 (max)	Kg-cm
Case Style	TO-220 D^2PAK			

Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance