

International
IOR Rectifier

6TQ...SPbF

SCHOTTKY RECTIFIER

6 Amp

$$I_{F(AV)} = 6\text{Amp}$$

$$V_R = 35/45\text{V}$$

Major Ratings and Characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular waveform	6	A
V_{RRM} range	35 / 45	V
I_{FSM} @ $t_p = 5 \mu\text{s}$ sine	690	A
V_F @ 6 Apk, $T_J = 125^\circ\text{C}$	0.53	V
T_J range	-55 to 175	$^\circ\text{C}$

Description/ Features

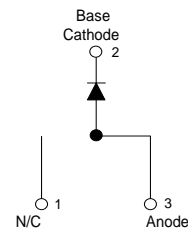
The 6TQ.. Schottky rectifier series has been optimized for low reverse leakage at high temperature. The proprietary barrier technology allows for reliable operation up to 175°C junction temperature. Typical applications are in switching power supplies, converters, free-wheeling diodes, and reverse battery protection.

- 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
- Lead-Free ("PbF" suffix)

Case Styles



D²PAK



Thermal-Mechanical Specifications

T _J	Max. Junction Temperature Range	-55 to 175	°C	
T _{stg}	Max. Storage Temperature Range	-55 to 175	°C	
R _{thJC}	Max. Thermal Resistance Junction to Case	2.2	°C/W	DC operation * See Fig. 4
R _{thCS}	Typical Thermal Resistance, Case to Heatsink	0.50	°C/W	Mounting surface , smooth and greased
wt	Approximate Weight	2 (0.07)		g (oz.)
T	Mounting Torque	Min. 6 (5) Max. 12 (10)	Kg-cm (lbf-in)	
	Marking Device	6TQ...S		Case style D ² Pak

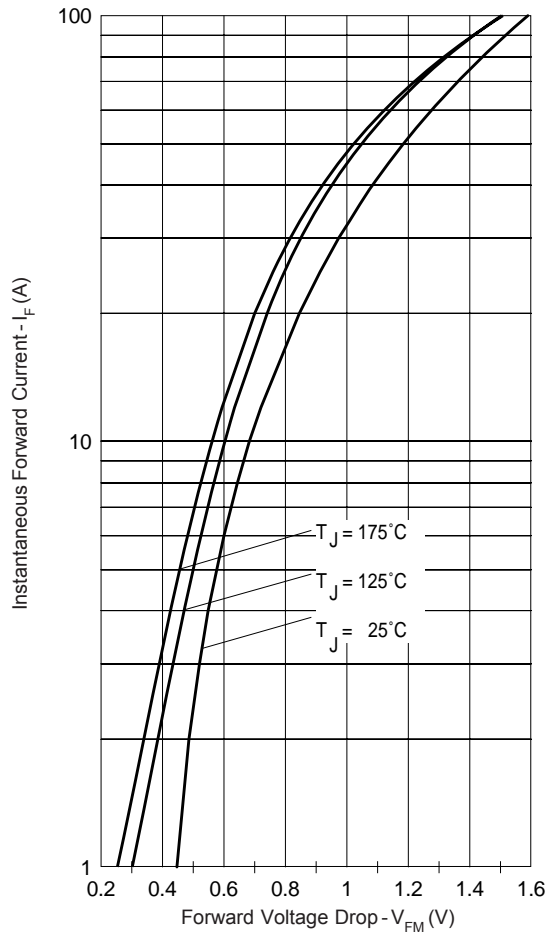


Fig. 1 - Maximum Forward Voltage Drop Characteristics

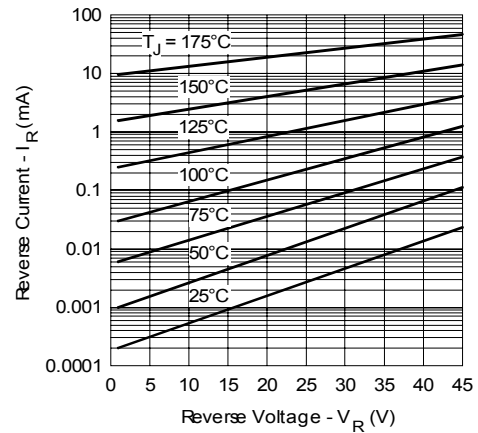


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

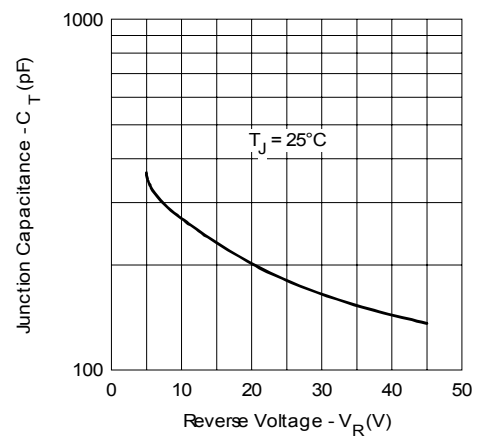


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

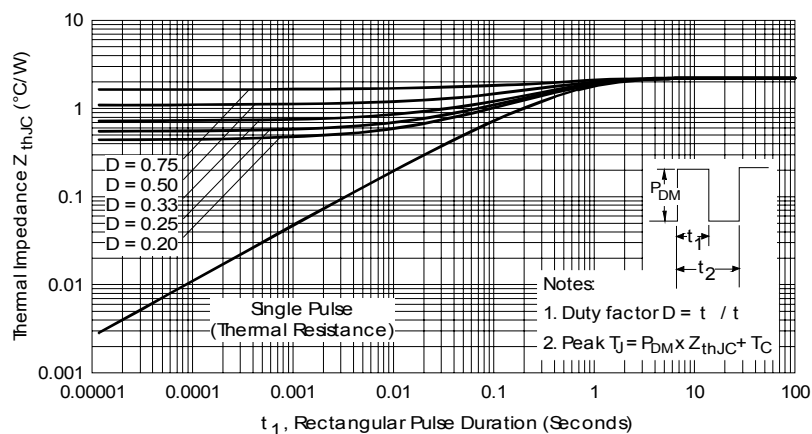


Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics

Fig. 5 - Maximum Allowable Case Temperature Vs. Average Forward Current

Fig.6 -Forward Power Loss Characteristics

Fig. 7- Non-Replicative Surge Current

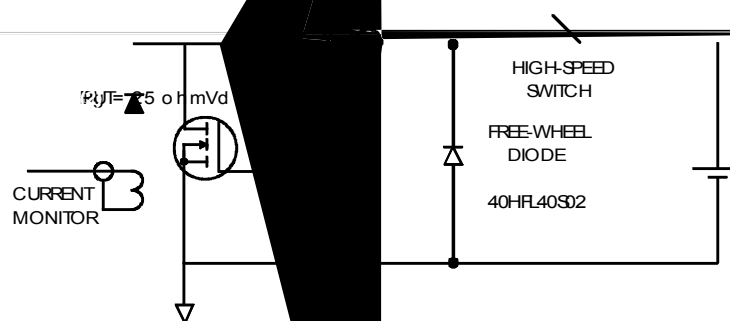
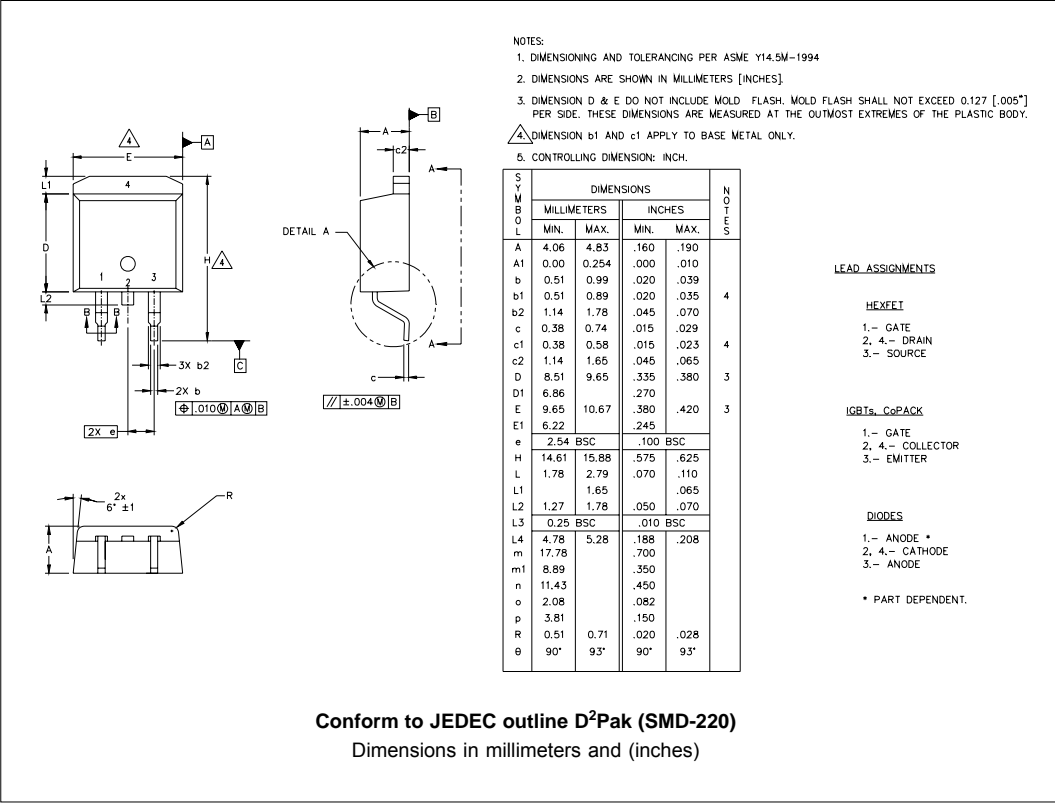
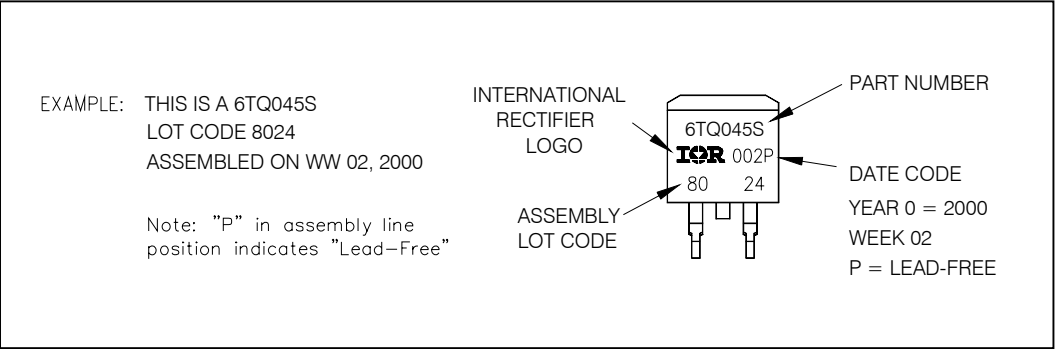


Fig. 8-4. Shielded Inductive Test Circuit

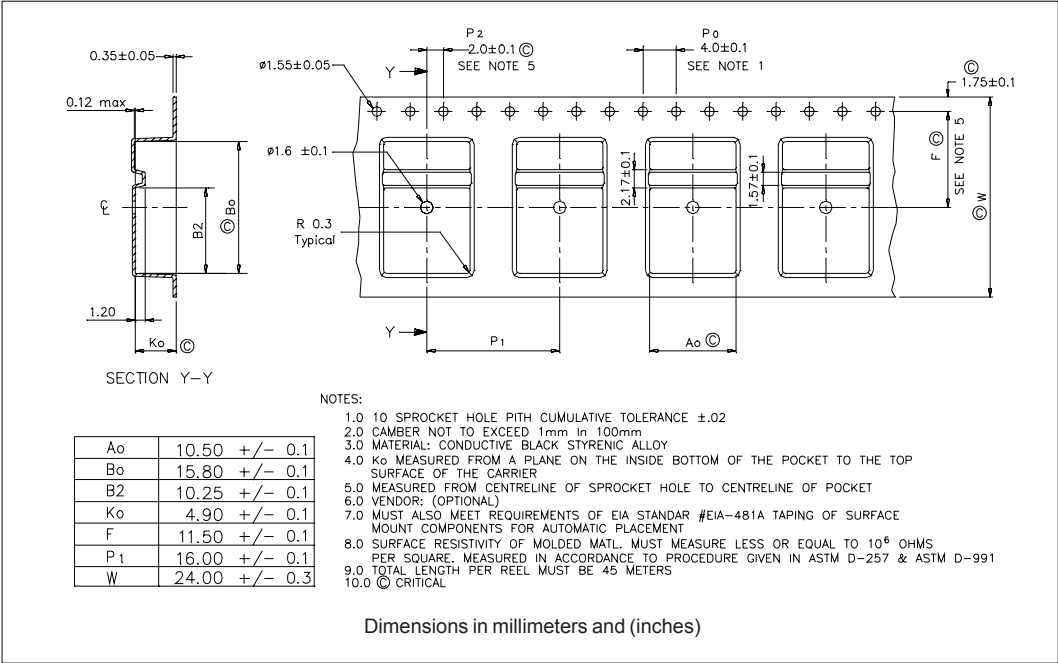
Outline Table



Part Marking Information



Tape & Reel Information



Ordering Information Table

Device Code						
6	T	Q	045	S	TRL	PbF
1	2	3	4	5	6	7
1	-	Current Rating (6A)				
2	-	Circuit Configuration				
		T = TO-220				
3	-	Schottky "Q" Series				
4	-	Voltage Ratings				
5	-	• S = D ² Pak				
6	-	• none = Tube (50 pieces)				
		• TRL = Tape & Reel (Left Oriented)				
		• TRR = Tape & Reel (Right Oriented)				
7	-	• none = Standard Production				
		• PbF = Lead-Free				

035 = 35V
040 = 40V
045 = 45V

Data and specifications subject to change without notice.
This product has been designed and qualified for Industrial Level and Lead-Free.
Qualification Standards can be found on IR's Web site.

International
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06/06



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