

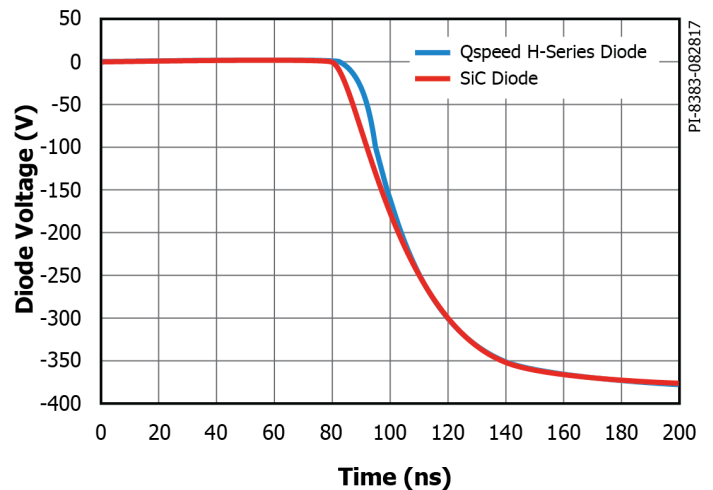
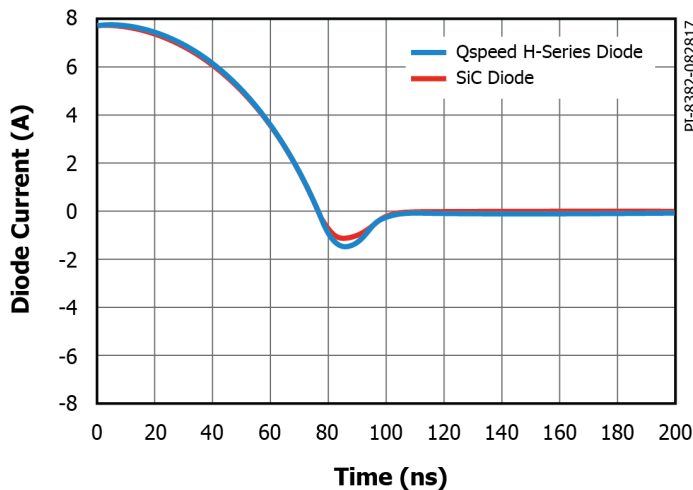
# Qspeed™ H-Series Diodes



## Key Features

- Low  $Q_{RR}$ , low  $I_{RRM}$ , low  $t_{RR}$  increases circuit efficiency
- High  $d_{IF}/dt$  capable (1000 A/ $\mu$ s)
- Enables extremely fast switching
- Soft recovery characteristic reduces EMI
- Eliminates need for snubber circuits
- Reduces EMI filter component size and count

## Qspeed Silicon Diodes Match the Performance of Silicon Carbide



## Applications

- Boost diode for PFC
- Motor drive circuits
- DC-AC inverters
- Output rectifiers

## Component Selection Table

Part Number	$V_{RRM}$ (max)	$I_{F<AVG>}$ ( $T_J = 150^\circ\text{C}$ )	$V_{F<TYP>}$ ( $T_J = 150^\circ\text{C}$ )	$Q_{RR}$ ( $T_J = 25^\circ\text{C}$ )	$Q_{RR}$ ( $T_J = 125^\circ\text{C}$ )
QH03TZ6002	600 V	3 A	2.1 V	5.8 nC	14.8 nC
QH03BZ600	600 V	3 A	2.1 V	5.8 nC	14.8 nC
QH05TZ600	600 V	5 A	2.2 V	6.5 nC	18.9 nC
QH05BZ600	600 V	5 A	2.2 V	6.5 nC	18.9 nC
QH08TZ600	600 V	8 A	2.2 V	8.0 nC	25.5 nC
QH08BZ600	600 V	8 A	2.2 V	8.0 nC	25.5 nC
QH12TZ600	600 V	12 A	2.3 V	9.2 nC	30 nC
QH12BZ600	600 V	12 A	2.3 V	9.2 nC	30 nC



B: TO-263 (D2PAK) package  
T: TO-220 package

## Design Support

- Application Note [Qspeed high temperature reverse bias reliability testing \(AN-300\)](#)  
([www.power.com/an-300](http://www.power.com/an-300))
- Application Note [Qspeed reverse recovery charge, current and time \(AN-301\)](#)  
([www.power.com/an-301](http://www.power.com/an-301))
- Application Note [Qspeed reverse voltage sharing of series rectifiers \(AN-302\)](#)  
([www.power.com/an-302](http://www.power.com/an-302))
- Application Note [Qspeed family RoHS compliant soldering considerations \(AN-303\)](#)  
([www.power.com/an-303](http://www.power.com/an-303))