HD30U20DD

## FRED
Ultrafast Soft Recovery Diode

FEATURES:

- Ultrafast Recovery

- 175°C operating junction temperature

- Designed and qualified for industrial level

Benefits:

- Reduced RFI and EMI
- Higher frequency operation
- Reduced snubbing
- Reduced part count

Product Summary	
V_R	200 V
$I_{F(AV)}$	2*15A
t_{rr}	18ns
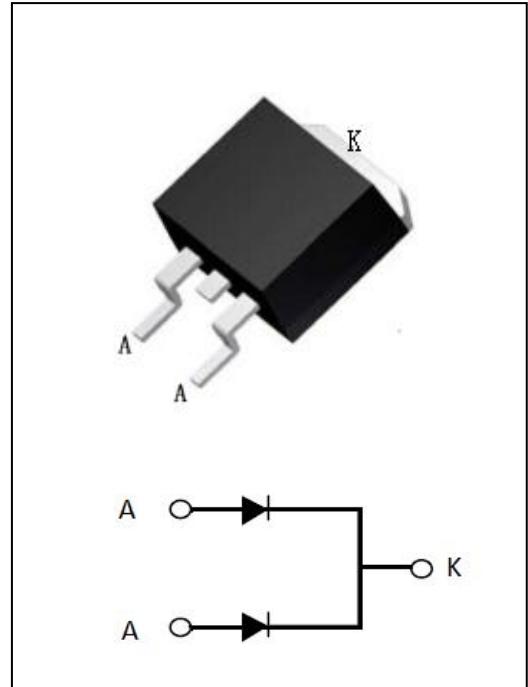
Description/Applications

These diodes are optimized to less losses and EMI/RFI in high frequency power conditioning system. The soft recovery behavior of the diodes offers the need as snubber in most applications. These devices are ideally suited for HF welding power converters and other applications where the switching losses are not significant portion of the total losses.

Absolute Maximum Ratings				
Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	V_{RRM}		200	V
Continuous forward current	$I_{F(AV)}$	$T_C = 25°C$	30	A
Single pulse forward current	I_{FSM}	$T_C = 25°C$	150	
Maximum repetitive forward current	I_{FRM}	Square wave, 20kHZ	50	
Operating junction	T_j		175	°C
Storage temperatures	T_{stg}		-55 to +175	°C

Electrical characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ.	Max.	Units
Breakdown voltage Blocking voltage	V_{BR}, V_R	I_R=100μA	200			V
Forward voltage (Per Diode)	V_F	I_F=15 A		0.90	1.0	
		I_F=15 A, Tj =125°C		0.80	0.9	
Reverse leakage current(Per Diode)	I_R	V_R= V_{RRM}			10	μA
		Tj=150°C, V_R=200V			100	
Reverse recovery time(Per Diode)	t_{rr}	I_F=0.5A, I_R=1A, I_{RR}=0.25A		25	30	ns
		I_F=1A, V_R=30V, di/dt =200A/us		18	30	

Thermal characteristics

Paramter	Symbol	Typ	Units
Junction-to-Case	$R_{\theta JC}$	0.8	℃/W

Electrical performance (typic)

Forward Characteristic(typ.)

Reverse Characteristic(typ.)
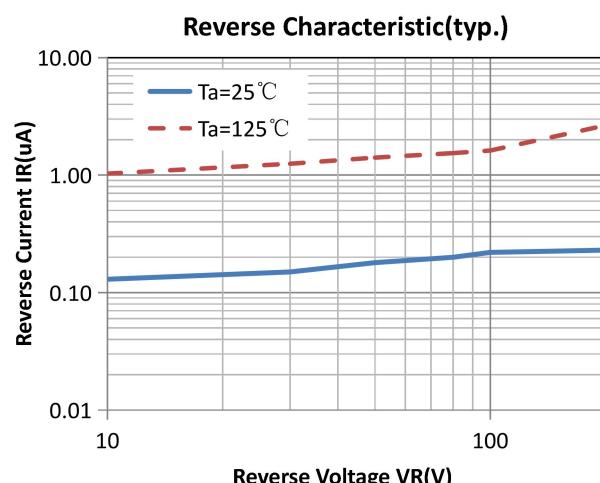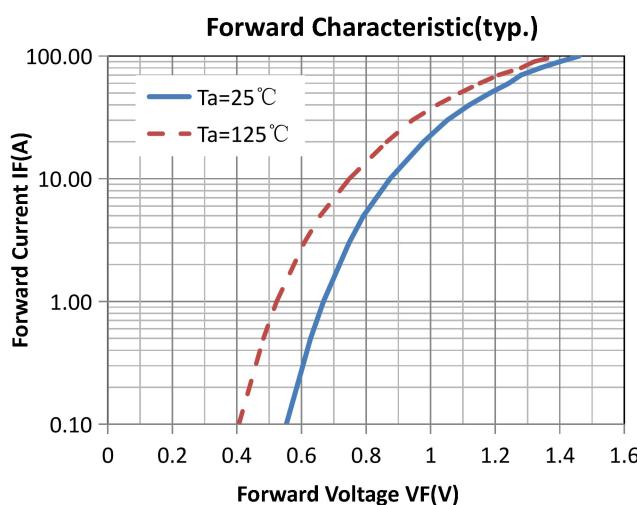
Package Information

TO-263   PACKAGE
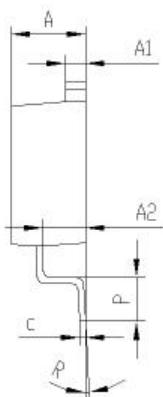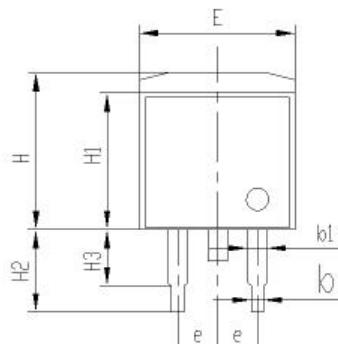
Symbol	Dimensions(millimeters)	
	Min.	Max.
A	4.50	4.90
A1	1.17	1.37
A2	2.40	2.80
b	0.60	1.00
b1	0.95	1.35
c	0.26	0.50
e	2.34	2.74
E	9.70	10.1
H	9.80	10.2
H1	8.50	8.90
H2	5.05	5.45
H3	3.60	4.00
R	0°	6°
P	2.55	2.95